ABSTRACTS FOR INTERNATIONAL FAMILY HEALTH CONFERENCE 2019 I-FaH 2019

Health Intervention Towards Community Wellness

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KEYNOTE

Health as a Domain of Family Well-being

Dato' Dr Narimah Awin

National Population and Family Development Board, Bangunan LPPKN, No. 12B, Jalan Raja Laut, 50350 Kuala Lumpur

*Author's email: drnarimah66@gmail.com

ABSTRACT

The keynote addresses the topic of "Health as a domain of family well-being" to provide an overarching perspective to the conference's theme, "Health intervention towards community wellness". "Well-being" is taken as the bigger focus of living a healthy life, and "health" as one of several domains towards achieving well-being. The WHO definition (1948) links health explicitly to well-being. Well-being can be viewed from 2 perspectives (i) Objective well-being (basic human needs, e.g. food, shelter, health). (ii) Subjective well-being, (self-perception of well-being, e.g. satisfaction with life). The National Population and Family Development Board (LPPKN), Malaysia, conducts surveys to measure the Family Well-being Index. In this index, family well-being has eight domains: health, family relationships, economy, family and community, safety, housing and environment, religion/spirituality, and use of communication technology. The health domain measures health level, health practice and stress management. Two surveys have been conducted, i.e. in 2011 and 2016, and the third one is currently ongoing. The Family Well-being Index is a figure between 0 and 10. In 2011, the national Family Well-being Index was 7.55, and in 2016 it was 7.33. Both scores were in the range of moderate level.

Keywords: Health intervention, Family Wellbeing Index, Malaysia

PLENARY

Dimensions of Women's Autonomy and their Impacts on Mothers' and Children's Health

Ida Yustina

Faculty of Public Health, Universitas Sumatera Utara, Jl. Universitas No. 21 Kampus USU, Medan 20155, Indonesia

*Author's email: idayust@yahoo.com

ABSTRACT

Indonesia is still one of the countries with high Maternal Mortality Ratio (MMR) in South-East Asia with an MMR of 305 per 100,000 live births in 2015 and thus not achieving the Millennium Development Goal 5 (MDG 5) target. High percentage of home delivery (29.6%) is one of the factors which contributes to this. Preference for home delivery is due to: 1) supportive home situation, 2) family warmness, 3) affordable, and 4) availability of a midwife to assist home delivery. Consequently, there is delay in referring mothers with complications during home delivery. Other reasons for the high MMR is lack of maternal autonomy in decision on place of delivery. The patriarchy system is part of the cultural and social structure of Indonesians. It limits women's position as decision maker, even on maternal and health matters. The position of women in the society is related to her age, educational level, and financial status. There is a need for the government to make a strong policy to overcome the problem of maternal mortality and home delivery in Indonesia. Delivery in health facilities with adequate amenities need to be emphasized.

Keywords: Women's autonomy, Maternal and child health, Maternal mortality ratio, Millennium Development Goal 5, Indonesia

Integrated Approach to Community Wellness: Has this been forgotten?

Sharifa Ezat Wan Puteh

Department of Community Health, Level 1, Blok Klinikal, National University of Malaysia, Medical Centre, Jalan Yaacob Latif, Bandar Tun Razak, Cheras, 56000 Kuala Lumpur

*Author's email: sh_ezat@ppukm.ukm.edu.my

ABSTRACT

Many a times, community targeted strategy works in silo and done haphazardly without any long-term planning and impact to the community. This wayward fashion has cost us millions of dollars, lost resources and dimmed motivation. Most of the time, incoherent planning and short-term targets are the motivators. Getting plans into policy is not a task to be taken lightly. Policies that are incoherent, disintegrated with organisational and national plans, will not be taken up as policy papers. Overcoming resistance is another method to ensure smoothness of policy acceptance. This involves enlisting communication with multiple stakeholders and hearing out qualms by community members. Community based insurance is an example. The initial social insurance has been in the agenda for multiple years already. In the past 3 years, this agenda has been sped up by political masterminds and NGOs. The Peka B40 and MySalam have been introduced in the Malaysian healthcare system. It is hoped that these two social health insurance will provide the much needed relief for community in the lower categories.

Keywords: Community wellness, Integrated approach, Peka B-40, MySalam, Health insurance

PLENARY

Advances in Family Health Programme in Malaysia

Faridah Abu Bakar

Director, Family Helath Development Division, Ministry of Health, Malaysia

*Author's email: drfabs@moh.gov.my

ABSTRACT

The Family Health Programme in Malaysia started off with a humble beginning in the 1920s by the introduction of midwifery legislation under the Straits Settlement Ordinance and the Federal Malay states Midwifery Enactment. Institutionalisation of nursing training took placed in the 1940s while the rural health services for pregnant women and children were established in the 1950's. In 1967, the school health program was initiated, followed by the delivery of the school health services in 1972. The Ministry of Health (MoH) set up a Maternal and Child Health unit within the MoH organisation in 1974 to oversee the maternal, child and school health activities. In 1996, the Family Health Development Division was established with the prenatal, adolescent, adult, people with disability and nutrition health services were incorporated into the family health activities. Subsequently, the age-group wellness and population genetic screening were introduced in year 2000. The family health programme has embraced the public health approach as its building blocks. Throughout the years, individual patient care has advanced the most through the improvement of standards and quality of services within the health clinics. Plateauing of maternal mortality ratio and under-5 mortality rate, increasing trend of non-communicable diseases, remerging of communicable diseases, urbanisation and globalization, and increasing ageing population are new challenges in the delivery of family health services to the community. In order to cater for these challenges, it is crucial to recognise the population health as one of the main component in the family health programmes. Transformation in the scope of new family and population health is needed to improve the delivery of family programme beyond the boundary of MoH facilities.

Keywords: Family Health Programme, Maternal and child health, Ministry of Health Malaysia, Under-5-mortality

Community-based Supplementary Feeding Programme for Malnourished Indigenous Children: Sharing an Experience in Kemar, Hulu Perak Settlement

Noor Asmah ASA,*, Farhana AK, Norazlina MN, Mohd Shazuan Irwan MS

Hulu Perak District Health Office, Perak

*Corresponding author's email: anna8199@yahoo.com

ABSTRACT

Introduction: Childhood malnutrition is common and severe among indigenous community. The Community Feeding Program was first launched in 2010 among 15 villages in Kemar indigenous settlement among children below six years old. The objective of this study was to improve the nutrition status of indigenous children in Kemar settlement, Hulu Perak. **Methods:** All the indigenous children aged below six received high calorie food, full cream milk and multivitamin with an average of 500kcal/day. Ready to Use Therapeutic Food (RUTF), specified for malnourished children, provides nutrition that accounts for one-half to two-thirds of a child's daily needs. The feeding sessions was carried out once a day, five days a week and managed by a group of trained local volunteers and research assistants. Weight and height were measured monthly. **Results:** The coverage throughout 2013 to 2018, ranged from 90.3% to 100%. The percentage of children with normal body weight had increased from only 38.7 % in 2010 to 60.6% in 2018. From year 2013 to 2018, the percentage of stunted children had reduced from 77% to 72.5%, and severe stunting reduced from 35.2% in 2015 to 24.9% in 2018. **Conclusion:** The continuity of this program is essential to sustain normal nutritional status and hence the wellbeing of this group of children in the interior remote community.

Keywords: Indigenous, Malnourished children, Supplementary feeding

SYMPOSIUM
S1A: INNOVATIONS ACROSS THE LIFE CYCLE

Impact of Clean and Healthy Living Behaviour Intervention among Community Islamic Leader

Destanul Aulia, Edy Sahrial, Sri Fajar Ayu, Mutia Nauli

Universitas Sumatera Utara, Jl. Universitas No. 21 Kampus USU, Medan 20155, Indonesia

* Corresponding author's email: aulia_destanul@yahoo.com

ABSTRACT

Introduction: Clean and Healthy Living Behavior (PHBS: Perilaku Hidup Bersih Sehat) is a government health promotion program to increase community independence in maintaining health. There are 10 indicators in PHBS: safe childbirth, exclusive breastfeeding, regular baby weighing, clean water usage, hand washing, clean latrine, eradication of mosquito larvae, nutritious food, physical activity, and no smoking at home. Padangsidimpuan is one of the areas in North Sumatra with low rate of healthy living practices although this area is a religious area that emphasizes the importance of hygiene and health care. This is evidenced by the high incidence of communicable diseases such as diarrhea and tuberculosis, and non-communicable diseases such as hypertension, diabetes and stroke. The objective of this study is to implement and evaluate the impact of PHBS program among Islamic community leaders in Padangsidimpuan. **Methods:** Quasi-experimental method was carried out on 30 Islamic leaders. The approach used were Focus Group Discussions, simulation and role plays. Related Quranic verses were incorporated in the intervention. **Results:** The pre-test results showed that 53.33% of the Islamic leaders scored between low to moderate on the knowledge, attitudes and behavior assessment. In the post-test, results showed that 56% of them scored between moderate to good. **Conclusion:** Based on this successful intervention, it is expected that the Islamic leaders can be the agent of change to improve the hygiene and health care practices in the community.

Keywords: Clean and healthy living behaviour, Intervention, Promotion, Islamic community leaders

Every Child Needs a Family

Yuzila Md Yusof

Orphancare Foundation Malaysia, No. 54, Jalan 5/60, Bukit Gasing, 46000 Petaling Jaya, Selangor

* Author's email: yuzila@orphancare.org.my

ABSTRACT

Introduction: According to PDRM statistic, in average, 100 babies are dumped every year, in Malaysia. The stigma of having babies out of wedlock, feeling of desperation and lack of support are some reasons why babies were dumped at the unimaginable places. Even if they were found and saved, these babies will be placed and raised at institutions. This will lead to the negative effects of institutionalisation as they do not receive appropriate adult care and attention which is crucial in developing their potential. OrphanCare Foundation advocates and provides services that ensure babies and children who are in institutions and those whose lives are at risk grow up in the care of a loving family. **Methods:** OrpahnCare Foundation provides a safe haven for babies that are being abandoned through baby hatch centres, finding a family for these babies through a legal adoption programme, and deinstitutionalisation (DI) i.e. removing all children currently in institutions, to family based care. **Results:** Since 2010, OrphanCare Foundation has saved a total of 369 babies and successfully arranged for the adoption of 221 babies. Forty even children were taken out from institutions and brought home to their families. **Conclusion:** The best place for a child to grow up is in the love and care of a family. They will receive personalised guidance, support and love that they need to develop to their full potential.

Keywords: Abandoned babies, Adoption, Baby Hatch, Deinstitutionalisation, Family Based Care

Nurturing Sexual Orientation among Children

Nor Sheereen Zulkerfly

Department of Psychiatry, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia, 43400 UPM Serdang, Selangor, Malaysia

* Author's email: sheereen@upm.edu.my

ABSTRACT

Sexual orientation other than heterosexuality is believed to be unnatural, sinful and dangerous in a country like Malaysia that is steadfast in religion and culture. Children sexual orientation has subsequently been a sensitive, challenging, and frightening topic for parents. Past studies have documented the role of nature and nurture in the development of social orientation. Although preliminary studies have found genetic to be a significant factor, it was inconclusive if it was the only factor in determining sexual orientation. Hence, this paper will highlight the role of parents in nurturing sexual orientation of children. Despite lack of studies in local and Western context, the few studies available indicated that a secure attachment bond between parent and child is essential for healthy psychosexual and identity development. Additionally, this paper highlights the importance of communication, unconditional love and support between parent and child throughout the developmental stages leading to adulthood. Furthermore, this paper will briefly discuss possible treatment options for children with sexual orientation issues and its impact on children psychological health and well-being. This paper will conclude with suggestions on future research to further understand the development of sexual orientation in children.

Keywords: Children sexual orientation, Psychological health, Psychological well-being

FAMILY HEALTH ORAL PRESENTATION

FHOP 01

Postpartum Traditional Maternal Care among Timor Tribe in Timor Tengah Selatan District, Nusa Tenggara Timur Province

Juita Sinambela[1], Ida Yustina[2], Etti Sudaryati[3,*]

[1] Department of Epidemiology, Faculty of Public Health, University of Sumatera Utara, Jl. Universitas No. 21 Kampus USU, Medan 20155, Indonesia
[2] Department of Administration and Health Policy, Faculty of Public Health, University of Sumatera Utara, Jl. Universitas No. 21 Kampus USU, Medan 20155, Indonesia
[3] Department of Public Health Nutrition, Faculty of Public Health, University of Sumatera Utara, Jl. Universitas No. 21 Kampus USU, Medan 20155, Indonesia

*Corresponding author: hizkiajeco@gmail.com

ABSTRACT

Introduction: Indonesia consists of thousands of large and small islands inhabited by hundreds of ethnic groups with diverse cultures which has created a distinctive unique health culture. Timor tribe is one of the tribes in Indonesia that has a specific culture in postpartum maternal care, which is called Sei tradition. The tradition of Sei is a tradition of piling / warming up new mothers with their babies for 40 days in the round house "*ume kbubu*". This study aims to explore more information about the practice of postpartum maternal care in Timor Tribe in Timor Tengah Selatan District. **Methods:** This research is qualitative research with phenomenology design. Data collection was conducted through in-depth interviews with 10 postpartum mothers, traditional leaders and health workers in August 2018 in Mollo Utara sub-district, Timor Tengah Selatan District, Indonesis. **Results:** The results showed that postpartum maternal care was based on hereditary traditions, the types of care were fumigation of the mother and baby for 40 days, hot compresses (*tatobi*) using hot water, food restrictions and prohibitions on going out until a thanksgiving event called 'kon afu'. **Conclusion:** The timor community believes that this practice makes mothers recover faster and babies stronger but in terms of health this tradition has a negative impact on the health of postpartum mothers and newborns, such as respiratory problems in infants and perineal infections in mothers.

Keywords: Tradition, Postpartum care, Timor tribe, Maternal care, Indonesia

FHOP 02

Predictors of Exclusive Breastfeeding among Mothers Attending Rural Health Clinics in Hulu Langat District

Farahana Mohamad Pilus, Norliza Ahmad*, Nor Afiah Mohd. Zulkefli

Department of Community Health, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia, 43400 Serdang, Selangor, Malaysia

*Corresponding author: norliza@upm.edu.my

ABSTRACT

Introduction: Even though exclusive breastfeeding prevalence has increased from 19.3% in 2006 to 47.1% in 2016, this practice was slightly higher in urban areas (48.3%) compared to rural area (45.1%) in Malaysia. National Plan of Action for Nutrition of Malaysia III has set an indicator to achieve at least 70% exclusive breastfeeding by 2025. This study was to identify predictors that influenced exclusive breastfeeding practice in rural areas. **Methods:** This cross-sectional study was conducted in six rural health clinics in Hulu Langat District, Selangor among mothers with the youngest child aged 6-48 months old. Respondents were selected through systematic random sampling. Validated self-administered questionnaire was used to assess sociodemographic factors, maternal factors, external factors and child's factors. Mother's height and weight were measured and body mass index was calculated. Data was analyzed using SPSS version 23. Multivariate logistic regression was used to determine the predictors for exclusive breastfeeding practice. **Results:** Response rate was 96% with a total of 311 mothers participated in this study. More than half of the mothers exclusively breastfed (52.4%). The predictors for exclusive breastfeeding were Malay ethnicity (AOR=3.951, 95% CI: 1.374-11.358), having tertiary education (AOR=2.401, 95% CI: 1.100-5.241) and positive attitude toward breastfeeding (AOR=7.755, 95% CI: 1.382-43.502). **Conclusion:** Prevalence of exclusive breastfeeding was higher in this study than the national level. Programme planners should pay special attention to Chinese and Indian ethnicities, mothers with a lower level of education and negative attitude in order to improve breastfeeding practice among rural mothers.

Keywords: Exclusive breastfeeding, Ethnicity, Attitude, Sociodemographic factors

FHOP 03

Relationship between Maternal and Obstetric Factors with Low Birth Weight Events in Newborns in Regional General Hospital dr. Pirngadi Medan

Nova Saragih*, Fazidah Aguslina Siregar, Zulhaida Lubis

Department of Reproductive Health, Faculty of Public Health, Universitas Sumatera Utara, Jln. Universitas No. 21, Kampus USU, Medan, 20155, Indonesia

*Corresponding author: nova.sartika23@gmail.com

ABSTRACT

Introduction: Cases of low birth weight babies (LBW) are a health problem that is found in many countries, especially in developing countries. The causes of LBW babies are multifactorial, one of which is maternal and obstetric. The purpose of this study was to determine the relationship between maternal and obstetric factors with the incidence of LBW. **Methods:** This study was a case control study design. The study was conducted at the Regional General Hospital dr. Pirngadi Medan, Indonesia with 190 babies born in the year 2018 (130 LBW babies, 59 babies of normal weight). Samples were obtained as many as 68 divided into 34 case groups and 34 control groups. Factors such as lack of iron supplementation (anaemia), history of LBW at previous labour, history of hypertension in pregnancy (pre-eclampsia, eclampsia), placenta previa, placental abruption. Data were analysed using Chi-square test, and multiple logistic regression test. **Results:** The study showed that factors related to LBW incidence in newborns were maternal anaemia ($p = 0.032$), history of LBW at previous delivery ($p = 0.014$), and placenta previa ($p = 0.027$). Unrelated factors were history of hypertension in pregnancy ($p = 1.124$), placental abruption ($p = 0.241$). The most dominant factor associated with the incidence of LBW was the history of LBW at previous deliveries ($PR = 4.35$), which meant that mothers who have a history of previous deliveries of LBW babies have a 4.3 times higher chance than mothers who do not have a history of LBW at previous deliveries. **Conclusion:** LBW is associated with anaemia, history of LBW at previous delivery, and placenta previa. Health workers must routinely educate mothers at ANC to prevent LBW babies.

Keywords: Maternal and obstetric factors, Low birth weight, Newborn, Indonesia

FHOP 04

Factors associated with Optimum Child Health Record Book Use among Parents Attending Government Health Clinics in Putrajaya

Siti Hafsah Abdul Halim, Nor Afiah Mohamad Zulkefli*

Department of Community Health, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia, 43400 Serdang, Selangor, Malaysia

*Corresponding author: norafiah@upm.edu.my

ABSTRACT

Introduction: The child health record book was long established in Malaysia, but no evaluation study on the utilisation of the book has ever been done. The objectives of the study were to determine the proportion of optimum record book use and the factors associated with it. **Methods:** A cross-sectional study was conducted among 415 randomly selected parents of children aged below six years old attending government health clinics in Putrajaya using a self-administered questionnaire. Optimum use of child health record book was defined by respondents reading all the sections and recording comments in the book. Factors studied were sociodemographic characteristics; antenatal and breastfeeding history; child's health and immunisation status; perceptions and level of knowledge on the book and child health; and healthcare providers' performance. Multiple logistic regression was used to identify the determinants of optimum use. **Results:** In total, 36.1% of respondents optimally used the record book. The five determinants of optimum use identified were mother's age group between 35-39 years and $\geq$40 years old (AOR: 2.24, 95% CI 1.13-4.44; AOR: 3.36, 95% CI 1.24-9.07), a mother with a higher level of education (AOR: 2.67, 95% CI 1.43-5.00), delivered in a government hospital (AOR: 3.01, 95% CI 1.11-8.16), had good level of knowledge on the record book and on general child health (AOR: 3.69, 95% CI 2.08-6.56; AOR: 2.07, 95% CI 1.19-3.60). **Conclusion:** The proportion of optimum child health record book use is relatively low. Based on the findings, improving the parents' knowledge on the child health record book utilisation is vital to increase the optimum usage particularly among mothers with low education level, aged less than 30 years old and those who delivered in non-government hospitals.

Keywords: Child health record book, Home-based record, Parent's knowledge, Malaysia

FHOP 05

Sociodemography and Cultural Risk Factor of Intrauterine Fetal Death (IUFD) in Langkat District

Rani Cahya*, Asfriyati, Sarma Nursani L. Raja

Faculty of Public Health, Universitas Sumatera Utara, Jln. Universitas No. 21, Kampus USU, Medan, 20155, Indonesia

*Corresponding author: ranisinambela.rc@gmail.com

ABSTRACT

Introduction: Intrauterine Fetal Death can occur due to poor maternal behavior during pregnancy and several factors related to physical, psychological, environmental, social, and cultural. This includes perinatal care, young or advanced maternal age, intervals between - short pregnancies, improved nutrition for the mother or fetus, unhygienic food, inadequate sanitation and hygiene facilities. This study aimed to analyze the sociodemographic and cultural factors of Intrauterine Fetal Death (IUFD) in Langkat District. **Methods:** This was an analytic observational study with case control design. The case samples in the study were the data of IUFD in Langkat District in 2018 and the control samples were born-alive infants in 2018, with the comparison case : control = 1: 2 (31:62). This study uses Chi Square statistical test and the data were obtained from the questionnaires. **Results:** The sociodemographic value of $\rho = 0.010$ ($\rho < 0.05$) and no cultural value = 0.594 ($\rho > 0.05$) in cases of IUFD in Langkat District was found. **Conclusion:** There was a significant effect of sociodemographic factors and there was no significant effect on cultural factors of IUFD in Langkat District.

Keywords: Culture, Intrauterine fetal death, Sociodemography, Sanitation

FHOP 06

Phenomenological Study on Causes of Adolescent Pregnancy

Elita Annisa Naibaho*, Sri Rahayu Sanusi, Asfriati

Faculty of Public Health, Universitas Sumatera Utara,   Jln. Universitas No. 21, Kampus USU, Medan, 20155, Indonesia

*Corresponding author: elitaannisa88@gmail.com

ABSTRACT

Introduction: Pregnancy in adolescents is an important issue in terms of health and social because it is related to the level of morbidity and mortality of mother and child. The main factors causing teen pregnancy are peer influence and lack of sex education in school. The social environment that has been entered by a teenager can also influence the pressure of his friend who has not had sexual relations. Inappropriate sexual behavior by adolescents is a result of a lack of knowledge which will later result in early pregnancy. The objective of this study was to explore the causes of adolescent pregnancy. **Methods:** The method used is qualitative research and phenomenology approach. Three pregnant girls as key informants were selected using purposive sampling in Pantai Labu Pekan Village Pantai Labu District, Deli Serdang Regency. Data was collected by in-depth interviews and analyzed then it is processed in the form of description, code and presentation. **Results:** The results of the initial survey show that the life experience of pregnant teenagers is a difficult journey to pass. The influence of peers and social media is the cause of premarital sex in adolescents. Many of them choose to continue their pregnancies and live their lives. Circumstances compel them to become young mothers for their children. **Conclusion:** The social response to the pregnancy naturally occurs. People consider these teenagers as women who cannot guard themselves and tend to live under pressure because they have not been able to be independent both financially and in childcare. The health impact was also felt by the teenager and her baby. This happens because the reproductive system is not satisfied in accepting pregnancy.

Keywords: Adolescence, Friends, Life Experience, Pregnancy, Sexual Education

FHOP 07

The Relationship between Age and Occupation with Dietary Patterns of Postpartum Mothers in the Village of Sigumuru Sub-district in West Padangsidimpuan

Adelina Fitri Tanjung*, Etti Sudaryati, Jumirah

Department of Public Health Nutrition, Faculty of Public Health, Universitas Sumatera Utara,   Jln. Universitas No. 21, Kampus USU, Medan, 20155, Indonesia

*Corresponding author: adelinatanjung66@gmail.com

ABSTRACT

Introduction: Diet is a regulation of the number and type of food with an overview of nutritional status. Nutrition is important in maintaining health and preventing disease. There are various diseases caused by lack of food or nutrition, bad eating patterns or overeating. In terms of diet, the choice of food and time to eat are influenced by age, work, habits, and socio-economic factors. This study aimed to determine the relationship between age and occupation and the diet pattern of postpartum mothers in Sigumuru Village, Padangsidimpuan Barat District. **Methods:** This is a descriptive study with a cross-sectional design which took place in the village of Sigumuru sub-district, West Sumatra with a total of 32 postpartum women as respondents. Data was collected using 24-hour recall. The independent variables in this study are age and occupation while the dependent variable is diet. Data analysis was done using the chi-square test. The relationship between the variables is considered significant if the p-value is <0.05. **Results:** Results showed that 71.9% of the respondents were aged 19-29, and 28.1% aged 30-50. Bivariate analysis showed that there was no association between age and postpartum diet (p > 0.05), energy intake (p = 0.341), protein intake (p = 0.560), carbohydrate intake (p = 0.242), fat intake (p = 0.022). However, there was a correlation between occupation and postpartum fat intake (p <0.05). **Conclusions:** There is a relationship between work with fat intake of postpartum mothers in Sigumuru Village, Padangsidimpuan Barat District. Future studies are expected to be able to analyze the most dominant nutritional factors in the diet of postpartum mothers.

Keywords: Diet, Age, Occupation, Postpartum, Nutritional

FHOP 08

Mapping of the Beta-Thalassaemia Carrier in Sabah: An Initial Step to Strengthen the Thalassaemia Prevention Program in Malaysia

Asit Sena[1], Saidatul Norbaya Buang[2,*], Soh Chin Li[1], Zaleha Sulaiman[1], Mohd Shahriel Md Daud[2], Kaharnisah Mat Noor[2] , Don Mohammed[2]

[1] Family Health Development Unit, Sabah Department of Health
[2] Family Health Development Division, Ministry of Health

*Corresponding author: s.norbaya@moh.gov.my

ABSTRACT

Introduction: Thalassaemia is an autosomal recessive disorder affecting 5 percent of the Malaysian population. The state of Sabah has the highest number of transfusion dependent thalassaemia and β-thalassaemia carrier in Malaysia. For Malaysia to be successful in the prevention of thalassaemia, Sabah needs to be focused on the preventive activities in areas with high prevalence of β-thalassaemia carriers. Thus, identifying the mapping of β-thalassaemia is crucial for planning for prevention activities. The objective of this study was to identify the prevalence of β-thalassaemia by districts and ethnic groups in Sabah. **Methods:** This study used data from Form 4 Thalassaemia Screening Records in 2017. The data were cleaned and analysed using Excel spreadsheet to calculate for the national and state specific prevalence of β-thalassaemia carrier. Subsequently, the data was used for mapping of high-risk districts and ethnic groups in Sabah. **Results:** A total of 31,655 Form 4 students from 242 secondary schools were screened in Sabah in 2017 and 1150 (3.6%) were diagnosed as β-thalassemia carrier. The prevalence of β thalassaemia carrier was higher in the West Coast of Sabah which include Kota Marudi District (11.1%), Nabawan (9.0%), Tambunan (8%), Tongod (7.5%), Ranau (7.0%), Kota Belud (5.0%), Kudat (4.6%), Tenom (4.1%) and Tuaran (4.0%). In the East Coast of Sabah, there was only the Beluran District (5.0%) had prevalence that higher than the state average. β-thalassaemia carriers were more likely to be of Dusun, Kadazan Dusun followed by Bajau, Murut and Rungus ethnic group. **Conclusion:** The distribution of β-thalassaemia carrier in Sabah was concentrated in the West Coast of Sabah and more common among the Dusun, Kadazan Dusun followed by Bajau, Murut and Rungus ethnic group. Thus, the thalassaemia prevention activities should be focuses in these areas and ethnic groups.

Keywords: Thalassaemia, Thalassaemia School Screening, Beta Thalassemia Carrier, Malaysia

FHOP 09

Effects of *Dali Ni Horbo* Supplementation on Children's Nutritional Status

Diana Garenta[1],*, Evawani Y. Aritonang[2], Rahayu Lubis[2], Amir Purba[2]

[1] STIKes Sumatera Utara, Jalan Jamin Ginting No. 10 Kecamatan Medan Tuntungan, Indonesia
[2] Faculty of Public Health University of Sumatera Utara, Jalan Dr. T Mansyur No.9 Medan, Indonesia

*Corresponding author: diana_ags@ymail.com

ABSTRACT

Introduction: The nutritional status of children determines the quality of human resources in the future. One of the nutritional problems in Indonesia is undernutrition. In North Sumatra Province, 13.5% of children are undernourished. Among the causes of undernutrition are poor dietary intake and the number of children in the family. One of the local foods that can be used to meet nutritional needs is *dali ni horbo*, which is a food ingredient that is fermented by buffalo milk. Thus, the purpose of this study was to evaluate the effect of *dali ni horbo* supplementation on children's weight gain. Methods: This study was a pretest-posttest quasi-experimental design among 25 children who were underweight. *Dali ni horbo* was given every day for three months. Measurement of the children's weight was carried out before starting on *dali ni horbo* and at the end of the three months of intervention. Results: The number of children in the family was a significant factor of undernutrition (p<0.001). The results of t-test revealed that the weight gain after *dali ni horbo* supplementation was significant (p value <0.001) as compared to the baseline. Conclusion: *Dali ni horbo* may be a potential supplementation to improve undernutrition in the community.

Keywords: Local food, *dali ni horbo*, Number of children, Nutritional status

FHOP 10

Aggression in Adolescents: The Biopsychosocial Predictors

Fatimah Ahmad Fauzi[1,2], Nor Afiah Mohd Zulkefli[1,*], Anisah Baharom[1]

[1] Department of Community Health, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia 43400, UPM Serdang, Selangor, Malaysia
[2] Ministry of Health Malaysia, Putrajaya, Federal Territory, 62590, Malaysia

*Corresponding author: norafiah@upm.edu.my

ABSTRACT

Introduction: Adolescent aggression has become a serious public health problem with the escalating juvenile cases and violence among secondary school students by inflicting harm to others. The objective of this study was to determine the biopsychosocial predictors of adolescent aggression among Form Four students in Hulu Langat. **Methods:** Cross-sectional study was conducted by proportionate population sampling method among Form Four students from all public secondary schools in Hulu Langat. Pre-tested questionnaires distributed to measure students' aggression, demographic (ethnicity, family income), biological (sex, head injury, nutritional deficiency, breakfast skipping), psychological (attitude towards aggression, normative beliefs to aggression, personality trait, and emotional intelligence), and social factors (family environment, single parent status, domestic violence, peer deviant affiliation, alcohol, smoking, and substance abuse). Data was analysed using multivariate analysis to determine the significant predictors. **Results:** 480 students from four randomly selected schools participated in the study with response rate of 96.5%. The median aggression score was low, which was 23.00 (IQR=12.00). From simple linear regression, 15 factors had significant relationship with adolescent aggression. The predictors of adolescent aggression were lower family income, Malay ethnicity, nutritional deficiency, attitude towards aggression, and peer deviant affiliation (F [8, 244] =15.980, p-value<0.001, adjusted R2=0.290). **Conclusion:** Adolescent aggression can be predicted by demographic and biopsychosocial dimensions, which can be targeted in future interventions with important public health implications.

Keywords: Adolescent, Aggression, Biopsychosocial, Cross-sectional, School

FHOP 11

Risk Perception for Developing Diabetes Among Gestational Diabetes Mellitus Patients in Johor Bahru

Fatin Aina Abu Bakar[1], Tengku Alina Tengku Ismail[1] , Suhaily Mohd Hairon[2] , Siti Suhaila Mohd Yusoff[2]

1 Department of Community Medicine, Universiti Sains Malaysia
2 Department of Family Medicine, Universiti Sains Malaysia

*Corresponding author: fatinaina41@student.usm.my

ABSTRACT

Introduction: Gestational diabetes mellitus is one of the most common complications during pregnancy which affects 15% of pregnant women globally. Gestational diabetes mellitus patients have seven times lifetime risk of developing type 2 diabetes compared to women with normal pregnancies. Despite these facts, gestational diabetes mellitus patients may not perceive themselves to be at risk for future diabetes. Thus, this study aimed to determine the perception of risk for developing diabetes and factors associated with high risk perception among gestational diabetes mellitus patients in Johor Bahru. **Methods:** A cross sectional study was conducted between April to May 2019 among 200 gestational diabetes mellitus patients attending primary health clinics in Johor Bahru, Malaysia. Data was collected using Malay translated and validated Risk Perception Survey on Developing Diabetes questionnaire. Multiple logistic regression analysis was performed using SPSS version 24.0. **Results:** There were 200 cases which fulfilled the inclusion and exclusion criteria in this study. The mean (SD) age of gestational diabetes mellitus patients in this study was 32.2 (4.8) years. Majority of them were from Malay ethnicity (74.5%) and 42.5% obtained higher education. Of these, 77.0% perceived themselves as high risk for developing diabetes. Higher knowledge scores and greater personal control were significantly associated with high perceived risk for developing diabetes (Adj. OR 2.08; 95% CI: 1.02,4.25; p=0.045 and Adj. OR 2.32; 95% CI: 1.16,4.63; p=0.017 respectively). **Conclusion:** Majority of gestational diabetes mellitus patients in this study accurately perceived themselves as having a high risk to develop diabetes in the future. Nevertheless, health education needs to be individualized and strengthened to ensure more patients are aware of the risk. In addition, further studies are needed to translate perceived risk into preventive health behaviours.

Keywords: Gestational diabetes mellitus, Knowledge, Personal control, Risk perception, Malaysia

FHOP 12

Birthplace Preference at Private Midwives' Practitioner: What Underlies the Decision?

Eka Dewi Srituti Mulyati*, Ida Yustina, Destanul Aulia

Faculty of Public Health, Universitas Sumatera Utara, Jl. Universitas No.32, Padang Bulan, Medan Baru, North Sumatra, Medan 20222, Indonesia

*Corresponding author: ekadewi.mulyati@gmail.com

ABSTRACT

Introduction: The Indonesian government has issued a policy of births at health facilities as one of the efforts in reducing maternal deaths. Data showed that 70% of deliveries in health facilities occurred at private midwives' practitioner and village maternity centres or home. However, the quality of the private midwives' maternal health care is still lacking. The objective of this study was to explore the factors underlying the women's decision in choosing to deliver at private midwives' practitioner. **Methods:** A qualitative study was conducted in Labuhanbatu District. Data was collected through in-depth interviews in July 2018 involving 15 up to 6 months postpartum mothers who underwent normal delivery, 5 husbands, 4 mothers/mother-in-law, and 3 private midwives. Content analysis was performed using an interview transcript, annotated with the researchers' notes. **Results:** It was shown that women chose private midwives' practitioner as a birth place because of family recommendations, privacy, distrust of government facility services, and previous experience of delivery. Most of the postpartum mothers said that delivery cost, distance and their knowledge about birth complications did not influence their choice of birthplace. **Conclusion:** The majority of decision-making regarding birthplace were based on the women's perceptions, experiences and family influence, regardless of the quality of maternal services at the birthplace. It is important to educate the women, family and community in choosing a birthplace that provides standardized maternal health services in order to prevent maternal deaths due to delayed referrals or management of complications that may occur during delivery.

Keywords: Maternal death, Place of birth, Private midwives' practitioner, Quality of delivery service

FHOP 13

Focus Group Discussions on Female Genital Cutting

Siti Nur Afiqah Zahari[1],*, Yufu Iguchi[2], Abdul Rashid[1]

[1] Department of Public Health Medicine, RCSI & UCD Malaysia Campus 4, Jalan Sepoy Lines, 10450 George Town, Pulau Pinang, Malaysia
[2] College of Public Health Medicine Ritsumeikan Asia Pacific University, 1-1 Jumonji Baru, Beppu, Oita, 874-8577 Japan

*Corresponding author: sitinurafiqah@rcsiucd.edu.my

ABSTRACT

Introduction: Female Genital Cutting (FGC) is a sensitive issue as this topic is always associated with religion and culture in Malaysia. In the past, FGC is performed by the traditional midwives. However, this practice has been medicalized nowadays. This study aimed to understand the reasons of performing FGC, the decision making, the practice and the future of FGC among rural community in Northern Malaysia. **Methods:** Focus group discussions (FGD) were conducted on three groups of young women aged 18-45, older women aged 45 and above and a group of married adult men. All of them were Malay Muslims who were conveniently selected from a rural village in Northern Malaysia. A semi-structured interview guide was used to conduct the FGD focusing on the reasons, decision making, the practice and the future of FGC. Data was collected until saturation of information was achieved. These participants were chosen based on their willingness to take part in the discussion and also based on their personality of being talkative and able to give feedback to the questions. **Results:** The result of the interviews revealed that religion is the reason of practicing FGC. All of the participants from each FGD prefer to go to the doctor in the clinic compared to the traditional midwives. The men in this FGD mentioned that they rarely involved in the decision making of the FGC and only the mother or the grandmother to take the responsibility to decide. **Conclusion:** Generally, majority Malay Muslims community from the rural areas in Northern Malaysia believed that FGC is compulsory in Islam and they prefer to go to the doctors to perform FGC.

Keywords: Female Genital Cutting, Focus Group Discussion, Qualitative, Rural, Malaysia

FHOP 14

Domestic Violence and Reproductive Health of Married Women in Banda Aceh, Aceh Province

Khairatus Shabah*, Sri Rahayu Sanusi, Namora Lumongga Lubis

Faculty of Public Health, Universitas Sumatera Utara, Jln. Universitas No. 21, Kampus USU, Medan, 20155, Indonesia

*Corresponding author: khaira_shabah@yahoo.com

ABSTRACT

Introduction: Intimate partner violence has long been recognized as a serious public health problem, with an estimated 30% of all women globally are likely to experience physical or sexual violence. Violence against women has serious consequences on their reproductive and sexual health including reproductive rights. This study aims to explore domestic violence and its consequences on reproductive health. **Methods:** This study was a qualitative study using case-study approach. In-depth interviews were conducted to collect information from informants. Participants were 3 married women, selected from P2TP2A which was a government institution that provided services for women and children suffering from violence. **Results:** All victims suffered more than two types of violence. Victims of violence tend to have high parity, and women who experienced violence were less likely to have cooperation from their husbands on contraception use. Victims tended to have lack of awareness on health examination especially with regards to reproductive health. **Conclusion:** This study suggest that domestic violence may have a negative impact on woman's reproductive health. Violence can expose women to poor reproductive health and lead to violation of reproductive rights

Keywords: Domestic Violence, Intimate Partner Violence, Reproductive Health, Reproductive Rights Wife Abuse

FHOP 15

Identifying Causes of Under Five Mortality for Better Planning

Nur Syakirah Awai*, Aminah Bee Mohd Kassim

Child Health Sector, Family Health Development Division, Ministry of Health, Malaysia

*Corresponding author: nsyakirah@moh.gov.com

ABSTRACT

Introduction: Under 5 mortality is a leading indicator of the level of child health and overall development of a country. In Malaysia, progressive reduction has been observed from 1990 however since 2000 progress has been static. Further understanding about this trend is crucial. The objective of this study was to identify causes of mortality for better policy development in order to further reduce this rate. **Methods:** Analysis of mortality trends was done using data from Department of Statistics and causes of mortality using data collected through the Stillbirth and Under 5 Mortality Reporting System (SU5MR) in 2016. **Results:** The trend for Under 5 mortality rate between 2006 till 2016 is still plateaued and hovered between 8 to 9 per 1000 live births at the national level. High percentage of death is seen among the neonatal group (51%), followed by children 28 days to 1year (31%) and toddlers 1-4 years (18%). Percentage of preventable deaths increased with age i.e. 21% among neonates, 41% among children 28 days to 1year and 48% among toddlers. The leading causes of death are conditions from perinatal period (34.4%), congenital malformation (30%), injuries and external causes (6.4%), respiratory (5.6%) and certain infectious and parasitic disease (5.1%). **Conclusion:** To further reduce under -5 mortality focus needs to be on preventable deaths; to reduce neonatal deaths will require political commitment to ensure adequate resources; interagency collaboration is needed to reduce toddler mortality and family and community awareness on prevention of injury and infection.

Keywords: Causes of mortality, Infant, Toddler, Preventable deaths, Under 5 mortality

FHOP 16

Knowledge on Immunisation among Nurses in Malaysia

Lidwina Edwin Amir, Aminah Bee Mohd Kassim*

Family Health Development Division, Ministry of Health, Malaysia

*Corresponding author: aminahbee@moh.gov.my

ABSTRACT

Introduction: The National Immunization Program in Malaysia began in the 1950s and was integrated into the Maternal and Child Health Program. Administrative data showed that coverage for all vaccinations was more than 95% except for measles vaccination. Despite the high coverage, there were clusters of outbreaks of vaccine preventable diseases. One of the reasons is the increasing phenomena of vaccines refusals following the rapid spread of negative perception and concerns through social media. Nurses as front liners play an important role to communicate on vaccine safety and adverse events (AEFI). A survey was conducted to identify the level of knowledge among nurses who deal with immunisation programme. **Methods:** Nurses from all states attending a National seminar on immunisation communication in Putrajaya were asked to answer a Digital online questionnaire. They were asked to answer 12 questions on knowledge of vaccines, immunization schedule and cold chain management. **Results:** A total of 74% (429) of the seminar participants responded to the questionnaire, of which 85% were from the government sector and 15% from private. Findings showed that although about 75% of the nurses had formal training on immunisation, 50% had lack of knowledge about vaccination schedule for defaulters and 63.2% (268) had knowledge gaps related to questions on vaccines and handling of vaccines. **Conclusion:** In view of the knowledge gap from this survey, there is a need for ongoing training for the nurses and evaluation by supervisors on the knowledge and practices among nurses.

Keywords: Immunisation, Knowledge, Nurses, Vaccine refusal, Training

FHOP 17

Women's Reproductive Health Rights of The Batak Tribe

Esra Simanjuntak*, Sri Rahayu Sanusi, Asfriyati

Faculty of Public Health, Universitas Sumatera Utara, Jln. Universitas No. 21, Kampus USU, Medan, 20155, Indonesia

*Corresponding author: esrasimanjuntak37@gmail.com

ABSTRACT

Introduction: Women's rights in reproductive health has not unfulfilled yet. It might be due to the culture believed that the position of men is higher rather than the women. Thus, this study was conducted to explore the perception of women's experience in obtaining reproductive health rights. **Methods:** This research is a qualitative research with a phenomenological approach. The sampling technique of this study was carried out by the purposive sampling technique. The five participants who participated in this study were Batak tribe women who are married and have children in the Silando village, Muara Subdistrict. The data is the retrieved through in-depth interviews as well as field records. The data analysed by formulating keywords obtained from the participant's statements, which are then sorted into themes. **Results:** The results of the study indicate that there are several rights to women's reproductive health which have not been fulfilled. Patriarchal culture still dominates the community. Women are unable to choose their own prospective companion, the choice of obstetrical care and help during childbirth is influenced by economic and cultural conditions, as well as the determination of the number of children and the birth distance between the children they would bear. The decision to take part in the Kelurga Berencana (Indonesian contraceptives program) depends on the agreement of the husband and in-laws. The Information obtained by women about reproductive health is still inadequate. **Conclusion:** The patriarchal culture influences the position of women within the society, women do not have the adequate knowledge on their reproductive health rights. Counselling services is needed to be provided by the health care workers for women to increase their knowledge on pregnancy and childbirth. Health care workers are expected to improve the health services they provided, especially in villages that are still difficult to receive health facilities.

Keywords: The Batak Tribe, Contraceptive programme, Reproductive Health of Women, Women's rights

FHOP 18

Successful Exclusive Breastfeeding Strategy Among Full-Time Working Mothers in Puskesmas Kartini Pematangsiantar City 2019

Marbun Renny Maria*, Heru Santosa, Zulhaida Lubis

Faculty of Public Health, Universitas Sumatera Utara, Jln. Universitas No. 21, Kampus USU, Medan, 20155, Indonesia

*Corresponding author: rennymarbun84@gmail.com

ABSTRACT

Introduction: Breast milk is important to improve the immune system of a baby. It is also effective and cheap. Mothers returning to work is one of the causes of the decline in exclusive breastfeeding practice. On the other hand, there is a small group of working mothers who successfully continued exclusive breastfeeding even after returning to work. This study was conducted to explore the strategies used by full-time working mother to be successful in exclusive breastfeeding and to explore the role of family members to support the mothers in   exclusive breastfeeding. **Methods:** This study was a qualitative study using a phenomenological approach. In-depth interviews were conducted to gather in-depth information from mothers working 40 hours a week or eight hours a day. **Results:** There were several strategies used by full-time working mother to be successful in exclusive breastfeeding. These include, giving breast milk that had been pumped and stored in the refrigerator. So that, they have enough stock of breast milk to feed the baby when they left to work. They are also continued to express breast milk at home and at work place after completed the maternity leaves. Another strategy being practice is that some of the mother going back home during rest time just to breastfeed their babies because of the distance of their house is near to their work place. Husband, parents, parents in law and baby sitter have an important role to give support for full-time working mothers in exclusive breastfeeding. **Conclusion:** This study showed that several strategies used by full-time working mothers to be successful in exclusive breastfeeding with their family support. The strategies can be used to promote exclusive breastfeeding among working mothers.

Keywords: Breastfeeding, Express breast milk, Family support, Working mothers

FHOP 19

Malaysia's Success in Eliminating Mother-to-Child Transmission of HIV and Syphilis

Mohd Nasir Abd Aziz*

Disease Control Division, Public Health Division, Ministry of Health Malaysia, Level 4, Block E10, Parcel E, Federal Government Administrative Centre, 62590 Putrajaya, Malaysia.

*Corresponding author: drnasir@moh.gov.my

ABSTRACT

Introduction: HIV and syphilis testing has been part of Malaysia's comprehensive maternal & child health programme for more than 2 decades. Part of this antenatal package include lifelong antiretroviral (ARV) treatment to HIV+ pregnant women, free antiretroviral therapy (ART) prophylaxis/ infant formula for all HIV-exposed infants and appropriate management for syphilis positive antenatal mothers. The objective of this paper is to present the analysis of Malaysia's achievement in obtaining the elimination of mother-to-child transmission of HIV (eMTCT) and syphilis status from the World Health Organisation (WHO). **Methods:** This survey is based on our surveillance and analysis of data on HIV and syphilis testing on pregnant women over a three-year period, beginning from 2015. **Results:** Malaysia's national health survey revealed 97.4% of pregnant women in Malaysia had a minimum of four antenatal visits. The MOH's surveillance system also showed 95.1% and 95.8% of pregnant women received HIV/ syphilis screening in 2015 and 2016 respectively, whilst the HIV vertical transmission rate declined from 16.12% in 2000 to 2.46% and 1.99% in 2015 and 2016 respectively. Congenital syphilis rates declined from 6.0 / 100,000 live births in 2012 to 5.0 and 4.0/ 100,000 live births in 2015 and 2016 respectively. In addition, more than 95% of antenatal mothers living with HIV received ARV and almost 100% of TPHA positive (Treponema pallidum haemagglutination) of expectant mothers received appropriate treatment. **Conclusion:** Based on such impressive findings, Malaysia was recognised by WHO in May 2018 as the first country in the Western Pacific Region to have successfully "eliminated" a significant public health problem.

Keywords: Anti-retroviral, Elimination of mother-to-child transmission, HIV-exposed infants, Surveillance, Sexually transmitted infections, Malaysia

ENVIRONMENTAL AND OCCUPATIONAL HEALTH ORAL PRESENTATION
EOHOP 01

Exposure to Pesticide among Farmers in Sumber Mufakat Village

Eka Lestari Mahyuni[1,*], R. Hamdani Harahap[2] , Urip Harahap[3], Nurmaini[1]

[1] Public Health Faculty,University of Sumatera Utara,Indonesia
[2] Faculty of Social and Politics, University of Sumatera Utara, Indonesia
[3] Faculty of Pharmacy, University of Sumatera Utara, Indonesia

*Corresponding author: eka.lestari@usu.ac.id

ABSTRACT

Introduction: Pesticide use is a problem that is commonly found in developing countries including Indonesia. This study aims to identify the sources of exposure to pesticides among farmers. **Methods:** This is a survey study done by using the form of subject evaluation. The identification carried out on the behavior of farmers while using pesticide. This research was conducted in Sumber Mufakat villages whereby most of the populations were horticulture farmers. Purposive technique sampling was done. Data were collected by direct observation and interviews. **Results:** The results showed that the source of exposure to pesticides among farmers in Sumber Mufakat village were mostly from inhalation (92%) and dermal (86%) among sprayed behaviour which meant the source of exposure based on air borne and dermal contact with pesticides. The risk behavior that increases pesticide exposure like blowing the holes in sprayers to lure liquid pesticides (45%) and direct contact with pesticides where farmers never used personal protection (98%). The skin and eye exposure took place as wind direction could not be avoided. **Conclusion:** The source of pesticide exposure was linked to farmer's behaviors.

Keywords: Dermal, Farmer, Inhalation, Pesticide exposure, Sprayed behaviour

EOHOP 02

Environmental Health Risk Assessment of Lead (Pb) Exposure in Well Water Destroying Population around the Recycling Battery Industry Village Bandar Khalipah

Syarifah Fadrina*, Nurmaini

Department of Environmental Health, Faculty of Public Health, Universitas Sumatera Utara, Jalan Universitas No.21 USU Campus Padang Bulan Medan 20155, Medan, Indonesia

*Corresponding author: syarifah.fadrina@gmail.com

ABSTRACT

Introduction: One effective way to avoid the accumulation of waste is Hazardous Toxic namely the Battery Recycling Industry. However, the processing is still simple, which has an effect on the environment and surrounding residents. The objective of this study was to find out environmental health risk assessment through on desk evaluation to see the level of risk of exposure to Lead (Pb) in Well Water Digging Resident in the AKI Recycling Industry in Hamlet III Bandar Khalifah Village. **Methods:** This study is a quantitative descriptive study using an approach to environmental health risk analysis through on desk evaluation to see the level of risk of Lead metal exposure in Gali resident well water in the AKI Recycling Industry Area in Hamlet III Bandar Khalifah Village. **Results:** This results were obtained at a distance of 50 meters from industrial estates with a total sample of 10, namely the risk of questions of 0.15 mg / L, 0.25 mg / L, 0.32 mg / L, 0.42 mg / L, 0 , 85 mg / L. **Conclusion:** Risk Characteristics (RQ) shows Lead (Pb) <1 means that lifetime exposure has not posed a health risk to residents around the AKI Recycling Industry Area. It is recommended that the community to filter well water with a simple fast filtering method so as not to pose a risk to public health.

Keywords: Battery recycling industry, Dig well, Pb, Industrial estate, Industrial waste

EOHOP 03

Analysis of Environmental Health Risk of Hydrogen Sulphide Exposure among Scavengers in Mrican Landfill, Ponorogo Regency

Elohansen Sihotang*, Irnawati Marsaulina

Department of Environmental Health, Faculty of Public Health, Universitas Sumatera Utara, Jalan Universitas No.21 Kampus USU Padang Bulan Medan 20155, Indonesia

*Corresponding author: sihotangelohansen@ymail.com

ABSTRACT

Introduction: Landfill of Mrican Regency of Ponorogo contributes to various issues of health and air pollution. The main complaints that were typically found in the scavenger were disorders of the respiratory system such as coughing, shortness of breath and chest pains. The purpose of this research was to analyse the magnitude exposure of the risk to the scavenger. Methods: The method of this research is the environmental health risk analysis table method (ARKL table) as secondary data was used. Results: The study was conducted in three zones which was in zone A=0.024 mg/ m^3 and zone B=0.022 mg/m^3 have exceeded the limit of quality standards of 0.02 mg/ m^3. However, it does not exceed the standard quality limit in zone C=0.019 mg/ m^3. The Risk Question (RQ) value obtained at all measuring points has RQ<1 which meant that exposure to H$_2$S was safe. Conclusion: There was no effect of H$_2$S exposure to scavenger as the RQ<1. The risk management requires the limitation of pollutant concentration and limitation of exposure duration. Scavenger is recommended to use of personal protective equipment.

Keywords: Analysis of environmental health risk, ARKL table, Hydrogen sulfide, Landfill, Scavenger

EOHOP 04

Environmental Health Risk Assessment of Ferrum (Fe) Content in Well Water in Patumbak Village, Patumbak Subdistrict, Deli Serdang Regency

Ayu Handayani*, Nurmaini

Department of Environmental Health, Faculty of Public Health, Universitas Sumatera Utara, Jalan Universitas No.21 Kampus USU Padang Bulan Medan 20155, Indonesia

*Corresponding author: handayaniayu82@gmail.com

ABSTRACT

Introduction: Pollution of well water occurs because factory wastewater seeps into the soil and mixes with ground water flowing on the ground. In connection with this, it is feared that the community well water in the Patumbak area was polluted from iron containing leachate which was used as drinking water. This has an impact on the health of people consuming well water in the area. The purpose of the study was to determine iron (Fe) level in the well water by using the Environmental Health Risk Analysis (EHRA). **Methods:** This research is a quantitative study using the Environmental Health Risk Analysis (EHRA) approach through on desktop evaluation to analyse the risk exposure of iron (Fe) content in well water in the area of The Patumbak Village, Patumbak Subdistrict, Deli Serdang Regency. **Results:** The results of five samples taken with different distances showed that the highest value of Iron content was 1.88 mg/l and the lowest was 1.41 mg/l. Both values exceeded the Requirements for Drinking Water Quality level of 0.3 mg/l. The risk characteristics of the agent (RQ) Iron (Fe) was less than 1, which meant that there was no risk to health. **Conclusion:** The amount of iron(Fe) in well water in the village of Patumbak, Patumbak Subdistrict, Deli Serdang Regency, exceeds the quality standard. However, the RQ was not related to the health of the community.

Keywords: Drinking water, Environmental Health Risk Assessment, Exposure, Ferrum, Well water

EOHOP 05

Environmental Health Risk Assesment of Manganese Exposure in Well Water in Amplas Village, Percut Sei Tuan Subdistrict, Deli Serdang Regency

Mery Christiyani*, Nurmaini

Department of Environmental Health, Faculty of Public Health, Universitas Sumatera Utara, Jalan Universitas No.21 Kampus USU Padang Bulan Medan 20155, Indonesia

*Corresponding author: merychristiyani96@gmail.com

ABSTRACT

Introduction: Water is an essential need for living things. In Indonesia, the water to be used must meet the quality requirements in accordance with the Minister of Health No. 492 of 2010. Although manganese is an essential nutrient in low doses, chronic exposure to high doses may be harmful. One of the target organs of manganese toxicity is the nervous system which results in neurological symptoms. The purpose of this study is to carry out environmental health risk assessment through the desk evaluation on manganese (Mn) exposure levels in well water in Amplas village. **Methods:** This research was a descriptive study with the use environmental health risk assesment (EHRA) to asses risk quation (RQ) of mangenese exposure in well water in Amplas village by desktop evaluation. Five samples were evaluated. **Results:** The results of five samples taken with different distances showed that value of Mn content sample 1= 3.58mg/l, sample 2= 1.56mg/l, sample 3= 2.01mg/l, sample 4= 4.18 mg/l, sample 5= 3.62mg/l. All values exceeded the requirements for Drinking Water Quality level of 0.4 mg/l. RQ in sample 4 Mn was more than 1, which meant that there was a risk to health. **Conclusion:** The amount of Mn in well water in Amplas village, exceeds the quality standard. It is recommended that the community to filter well water using a simple quick filter method before consumption so that the risk of exposure to Mn metal is not risky for public health.

Keywords: Drinking water, EHRA, Manganese, Well water

EOHOP 06

Environmental Health Risk Assessment of Lead Exposure at Well Water of Communities in Sei Rotan Village Deli Serdang Regency

Hana Novelina Siringoringo*, Nurmaini

Department of Environmental Health, Faculty of Public Health, Universitas Sumatera Utara, Jalan Universitas No.21 Kampus USU Padang Bulan Medan 20155, Indonesia

*Corresponding author: hananovelina@yahoo.com

ABSTRACT

Introduction: Sei Rotan Village Percut Sei Tuan District has become a place of the solid waste dumping of lead (Pb) industry from battery recycling which can damage the quality of the environment and pollute groundwater. People who use well water will be exposed to heavy metal lead in drinking water. Pb will accumulate within the body and result in gastrointestinal disorders, neurological damage and impaired kidney function. The purpose of this study was to asses health risk assessment through desk evaluation to see the level risk of Pb exposure levels at well water the Sei Rotan village. **Methods:** This research was a quantitative descriptive study using the Environmental Health Risk Assessment (EHRA) approach to asses risk quotient (RQ) of Pb exposure at well water around the accumulation of recycled solid waste residues in the Sei Rotan village by desktop evaluation. **Results:** The results of this analysis indicate that risk characteristics of Pb was RQ1=1, RQ2=1,125, RQ3,4=1,075, and RQ5=0,9. **Conclusion:** There was risk at station 1,2,3, and 4 with RQ of Pb exposure >1, which meant concentration of Pb will pose a risk of health problems. After risk management was carried out, safe concentration was 0,1147mg/l, the safe consumption rate was 2mg/l, and the duration of safe exposure obtained was 30 years. It is suggested for local governments to control industries to manage their waste properly and provide solid waste disposal sites far from community settlements so as not to pose a health hazard to the community.

Keywords: Drinking water, EHRA, Lead (Pb) exposure, Risk quotient, Well water

EOHOP 07

Risk Assessment of Iron (Fe) Exposure at Borehole Water Community around Terjun Landfill Area District Medan Marelan

Doni Pranciskus Sinaga*, Nurmaini

Department of Environmental Health, Faculty of Public Health, Universitas Sumatera Utara, Jalan Universitas No.21 Kampus USU Padang Bulan Medan 20155, Indonesia

*Corresponding author: donisinagasiantar@gmail.com

ABSTRACT

Introduction: The overload of iron may cause severe health problems such as liver cancer, diabetes, cirrhosis of liver, diseases related to heart and central nervous system, infertility etc. The presence of high concentration of iron leads to adverse changes in colour, odour and taste of water and it also stains clothes and utensils. Landfill area at terjun village Medan city is landfill with open dumping that collected 1500 – 1600 tone waste everyday with organic, anorganic, and heavy metals waste. The purpose of this study is to asses the risk quotient (RQ) of iron exposure at borehole water community in around Terjun Landfill area. **Methods:** This was a descriptive quantitative study using environmental health risk assessment (EHRA). Sample of borehole water was taken at 4 (four) distance from landfill area at 10m, 100m, 200m, and 350m. **Results:** Cosentration of Iron (Fe) in station I is 0,55mg/l, station II 0,47mg/l, station III 0,37mg/l, and station IV 0,28mg/l. Environmental health risk asssessment showed that risk quotient of iron exposure in four station is 0,02, 0,023, 0,017, and 0,013. **Conclusion:** Value of RQ < 1 which meant that people around there who consume borehole water are still safe and not at risk of causing health problem for lifetime condition. Iron content increase when borehole water near with landfill area.

Keywords: Borehole, EHRA, Landfill, Iron, Risk quotient

EOHOP 08

Environmental Health Risk Assessment of Fe Exposure in Well Water on the Residents of the Industrial Area of Dagang Kelambir Village Tanjung Morawa Deli Serdang

Tina Meirindany*, Nurmaini

Department of Environmental Health, Faculty of Public Health, Universitas Sumatera Utara, Jalan Universitas No.21 Kampus USU Padang Bulan Medan 20155, Indonesia

*Corresponding author: meirindanytina@gmail.com

ABSTRACT

Introduction: Industrial activities contribute greatly to the declining of water quality including high levels of heavy metal Fe in water wells around industrial estates. This can greatly endanger the health of the community, especially in settlements around industrial estates. This study was to identify the environmental health risk assessment through the desk evaluation to see the level of risk of Fe exposure levels in well water on the residents of Dagang Kelambir village industrial area of Dagang Kelambir Village Tanjung Moarawa Deli Serdang. **Methods:** This study was a quantitative descriptive study using environmental health risk analysis through an evaluation on the table approach to see the level of risk Fe exposure in water wells of residents in the village of Dagang Kelambir Tanjung Morawa Deli Serdang. **Results:** The results of this analysis indicated that risk characteristics (RQ) of Fe at Station 1 are 0,040 mg/L, Station II is 0,034 mg/L and Station III is 0,022 mg/L. **Conclusion:** Overall, risk characterisitics (RQ) of Fe exposure < 1, which meant that lifetime exposure has not risked causing health effects to residents around industrial estate. It is recommended that the commubity filter well water before consumption so that the risks of exposure and other metals do no pose a risk to public health.

Keywords: Environmental Health Risk Analysis, Iron (Fe), Well water, Industrial area, Industrial waste

EOHOP 09

Environmental Health Risks Assessment of Bore Well Water Following Mount Sinabung Volcano Eruption

Sri Malem Indirawati[1,*], Haesti Sembiring[2]

[1] Department of Environmental Health, Faculty of Public Health, Universitas Sumatera Utara, Jl. T. Maas No.2, Medan,20155, Indonesia.
[2] Health Polytechnic Ministry of Health Republic of Indonesia

*Corresponding author: srimalem@usu.ac.id

ABSTRACT

Introduction: Mount Sinabung is an active volcano in the Karo Highlands since its eruption in August 2010. There have been several eruptions over the eight years and this can cause changes in the soil's physical and chemical properties, and contamination of raw water supply with toxic elements such as plumbum (Pb). The objective of this study was to analyze the level of Pb in bore well water and to assess the environmental health risks. **Methods:** This survey was carried out in Nang Belawan village, Simpang Empat sub-district, Karo. Samples of water were taken from four bore well water. The raw water was analyzed by a water test kit. Profile of the villagers and information on the amount of water consumed per day were obtained. The environmental health risk assessment was also carried out. **Results:** A total of 56 samples were taken. The level of Pb in polluted water ranged from 0.17 to 0.9 mg/L. People who has been staying for at least 4 years, with average body weight of 55 kg, and consumed water at least 2 L/day had a Risk Quotient of more than 1. Those living in Nang Belawan 1 Huntap had a maximum Pb concentration of 0.9 mg/L **Conclusion:** There is a need to reduce the Pb concentration in raw water sources in this village in order to reduce their health risks.

Keywords: Pb, Drinking water, Post eruption, Health risks assessment

EOHOP 10

Association between Duration of Work and Health Symptoms of Carbon Monoxide Exposure among Motorcycle Mechanics

Kanaya Yori Damanik*, Nurmaini, Irnawati Marsaulina

Faculty of Public Health, University of Sumatera Utara, Indonesia

*Corresponding author: kanayayori@gmail.com

ABSTRACT

Introduction: Carbon Monoxide (CO) is a common atmospheric pollutant produced from vehicles that burn fossil fuels. Motorcycle mechanics are at high risk of health effects as a result of exposure to CO emissions from motorcycle exhaust. This study aimed to determine the relationship between the duration of working in a motorcycle workshop and symptoms related to CO exposure among motorcycle mechanics in Kecamatan Medan Sunggal. **Methods:** This was a cross sectional design. The workshops was selected using a purposive sampling technique and 72 mechanics were taken from total population of mechanics in the selected workshops. Chi-Square statistical test was used in the data analysis. Health symptoms data included sore eyes, difficulty in breathing, dizziness, and nausea, and were obtained using questionnaires. The CO level was measured using an impinger. The duration of work was classified into two categories: 5 years or more, and less than 5 years. **Results:** There was no significant relationship between duration of working in the workshop and health symptoms (p = 0.883, p>0.05). The average concentration of CO in workshops was 0.00066 ppm. This value is far below the threshold value of 25 ppm according to Permenkes No. 70 of 2016. **Conclusion:** The duration of working in the workshop was not significantly associated with health symptoms. This may be due to the low concentration of CO in the workshop. Monitoring of CO level at regular intervals can prevent health effects on the mechanics.

Keywords: Duration of work, Health symptoms, Mechanics, Motorcycle workshop, Carbon monoxide

EOHOP 11

Environmental Health Risk Assessment (EHRA) of Hydrogen Sulfide (H$_2$S) Exposure to Scavenger in Benowo Surabaya Dumpsite

Rita Kristina Pasaribu*, Nurmaini

Department of Environmental Health, Faculty of Public Health, Universitas Sumatera Utara, Jalan Universitas No.21 Kampus USU Padang Bulan Medan 20155, Indonesia

*Corresponding author: ritakpsshine@gmail.com

ABSTRACT

Introduction: Dumpsite is a physical facility for waste disposal activities and is the last link of municipal solid waste treatment as a means of storing or processing waste. These deposits cause air pollution, one of which is Hydrogen Sulfide (H$_2$S) gas and if exposed it will cause irritation of the eyes, nose, esophagus, difficulty breathing and even death at high concentrations. Scavengers are people who work every day at the landfill to collect used goods or certain waste that have the opportunity to be exposed to H$_2$S gas. The objective of this study was to analyze the environmental health risks of H$_2$S gas exposure to scavengers at Benowo Dumpsite, Surabaya. **Methods:** This study used a descriptive method with a cross sectional design and an Environmental Health Risk Assessment (EHRA) approach that used secondary data with 4 observation points at Benowo Dumpsite. **Results:** Risk Quotient (RQ) for adult groups with a body weight of 55 kg RQ at point 1 is 9.1; RQ at point 2 is 11.2 and RQ at point 3 is 4.1. **Conclusion:** RQ> 1 shows H2S exposure has an unsafe and risky risk level for the next 30 years. RQ values > 1 at all points indicate the need for environmental control and further research for risk management.

Keywords: Dumpsite, EHRA, Exposure, H$_2$S, Risk quotient, Scavenger

EOHOP 12

Dust Exposure Risk Assessment in Expedition Metra Millenium Company, Medan

Hetti Citra Marbun*, Nurmaini

Department of Environmental Health, Faculty of Public Health, Universitas Sumatera Utara, Jalan Universitas No.21 Kampus USU Padang Bulan Medan 20155, Indonesia

*Corresponding author: hetticitra88@gmail.com

ABSTRACT

Introduction: Health is a very important factor for increasing labor productivity. Dust is a type of air pollutant that is often found. Long-term dust exposure can result in health problems. The purpose of this study is to analyse the risk of dust exposure in Expedition Metra Millenium Company, Medan. **Methods:** This research is an analytic survey with cross sectional design using Environmental Health Risk Assessment (EHRA) desktop evaluation, which sample are 44 people (total population). The variables measured were dust hazard identification, dose-response analysis, exposure analysis, and risk characteristics. The measurement of respirable dust concentrations in the air was carried out in three locations in the warehouse, i.e. in the workshop, loading and unloading administration area. **Results:** The concentrations of respirable dust were 0.3168 mg/m³ in the workshop, 16.2888 mg/m³ in the loading area and 12.9303 mg/m³ in the unloading area. Intake (total agent risk received) the largest individuals that is at the workshop location which is 1,3469 mg/kg/day and risk quotient (RQ) > 1 which means that the population is at risk of non-carcinogenic effects in the next 30 years. **Conclusion:** The concentration of dust in certain working area is high and is a potential risk of diseases among the workers. It is recommended that control measures should be taken to reduce the exposure by is reduced by using respiratory protective equipment (RPE) or by controlling the extent of exposure.

Keywords: Risk Assessment, Dust Concentration, Exposure, Work Place, RPE

EOHOP 13

The Relationship of Exposure to PM_{10} and NO_2 with Complaints of Respiratory Disorders among Merchants at Amplas Terminal, Medan 2019

Lisa Anggriani Tanjung*, Irnawati Marsaulina, Nurmaini

Department of Environmental Health, Faculty of Public Health, Universitas Sumatera Utara, Jalan Universitas No.21 Kampus USU Padang Bulan Medan 20155, Indonesia

*Corresponding author: lisatanjung1988@gmail.com

ABSTRACT

Introduction: PM_{10} are airborne particles in solid form that are less than 10 micro-meters in diameter which can penetrate the thoracic region of the respiratory system. NO_2 is a gas found in air sourced from combustion, its concentration ranges from 50-100 ppm which can cause lung inflammation even with brief exposure of only a few minutes. This study aimed to determine the relationship between exposure levels of PM_{10} and NO_2 with respiratory complaints among traders at Amplas Terminal, Medan City. **Methods:** The study was a descriptive analytic survey of a cross sectional design. A total of 52 people was sampled in the study. **Results:** The results showed that PM_{10} concentration was 115 μg/m³ and NO_2 concentration was 114 μg/m³. This concentration did not pass the ambient air quality standard PP No. 41 of 1999 which was equal to 150 μg/m³ for PM_{10}, and 400 μg/m³ for NO_2. Among the respondents, 33 of them (63.46%) experienced complaints of respiratory problems, of whom 75% were above 45 years of age, 71.15% were women, 53.85% were respondents with trading duration of greater than 8 hours per day and 67.3% were traders who have been in the industry for more than 5 years. **Conclusion:** Traders were expected to use personal protection when trading, and relevant agencies were recommended to provide pollutant-absorbing plants at the terminal to reduce the level of air pollution in that area.

Keywords: Ambient air, PM_{10}, NO_2, Respiratory Disorders

EOHOP 14

Relationship of Fatigue with Musculoskeletal Disorders Complaints among Welders in Lhokseumawe 2019

Diana Putri*, Gerry Silaban, Ikhwansyah Isranuri

Department Occupational Health and Safety, Faculty of Public Health, Universitas Sumatera Utara, Jalan Universitas No.21 Kampus USU Padang Bulan Medan 20155, Medan, Indonesia

*Corresponding author: diana1.dd84@gmail.com

ABSTRACT

Introduction: Fatigue is a symptom where someone feels the motion slow and weak. Welders often exposed with posture, force, pressure, vibrations that could be impaired of musculoskeletal disorders (MSDs) complaint. MSDs was a complaint of a musculoskeletal problem that is felt from the low to the high severity. According to World Health Organisation, MSDs was the 4th leading cause of death in the low and middle income country in 2004. In Lhokseumawe, of 42 workers from 12 welding wethere was 27 workers had fatigues. The aim of the study is to investigate the relationship of the fatigue with MSDs at the welding worker in Lhokseumawe city. **Methods:** The study was a cross sectional study. The sample in this study was 42 workers. Analysis of data is univariate and bivariate. **Results:** The result showed that the prevalence of complaint MSDs was quite high, about 26 workers (65.0%). Variable were associated with complaints MSDs including age (p=0.003), and fatigue (p=0.002). **Conclusion:** The implications of research was there's a connection between age and exhausted with MSDs on welding workers in the Lhokseumawe city. Future suggestion is welding workers has to use the break times wisely, heed the nutrition requirement daily and routine exercise as recovery effort to avoid MSDs.

Keywords: Musculoskeletal disorders, Fatigue, Welders

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EOHOP 15

Relationship between Lead (Pb) in Ambient Air and Level of Lead (Pb) Concentration in Urine of Gas Station Operators in Pematangsiantar City in 2019

Heri Bastian Hutasoit

Department of Environmental Health, Faculty of Public Health, Universitas Sumatera Utara, Jalan Universitas No.21 Kampus USU Padang Bulan Medan 20155, Medan, Indonesia

*Corresponding author: herbas688hh@gmail.com

ABSTRACT

Introduction: Lead (Pb) is one of the main pollutants produced by combustion activities of motor fuel oil. Operators of the General Fuel Filling Stations (Gas Station) are groups of workers who are at risk of exposure to hazardous chemicals, particularly lead which comes from emissions of motor vehicles that are in queues for refueling. Level of lead in ambient air in this particular places is usually high, thus this study was conducted to identify the relationship between lead level in ambient air and level of lead concentration in the urine of gas station operators. **Methods:** This study was an observation analytical research of a cross sectional design and the sampling technique was purposive sampling. Sampling took place in Pematangsiantar City Gas Stations. 41 samples of urine were acquired, from the operator, while 41 samples from people without exposure to lead with identical range of age and gender were used as control. Pb metal in the urine was measured using an Atomic Absorption Spectro-photo meter (AAS). The urine lead level then was categorised as high (more than 50 μg/L) or normal (below 50 μg/L), then the power of significance was calculated using chi-square test. **Results:** Seventeen samples from 41 samples of urine which came from the operators, had a high level of lead, while 24 samples had normal level of lead. 4 samples out of 41 samples came from the controls had high level of lead, while the rest 37 samples of controls had low level of lead. The P value was 0.001. **Conclusion:** There is a significant relationship between ambient lead levels in air and lead concentration in urine from these exposures. It is recommended for workers at high risk of exposure to lead, such as gas station workers to wear personal protective equipment and to undergo regular medical assessment.

Keywords: Gas station officers, Lead in urine, Ambient air

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EOHOP 16

Work Environment Aspect on the Quality of Life of Informal Workers in Medan City Provinsi, North Sumatera

Nuraini[1,*], Heru Santosa[2], Erna Mutiara[2], Wirsal Hasan[2]

[1] Health Institute Helvetia Medan, Jalan Kapten Sumarsono No. 107 Medan Indonesia
[2] Faculty of Public Health, Universitas Sumatera Utara, Jalan Universitas No.21 Kampus USU Padang, Bulan Medan 20155, Medan, Indonesia

*Corresponding author: aini6828@yahoo.com

ABSTRACT

Introduction: Informal workers are alternative options in occupational field without specific requirements such as education or expertise and are also considered as unorganized types of business. This employment phenomenon is rapidly expanding in most developing countries, including Indonesia. Informal sector workers are very dominant sectors of the labor force based on report by the Central Statistics. The work environment is a condition related to social life and physical condition of the workplace which poses an impact on informal workers in carrying out their duties. The main objective of this study was to determine the effect of the work environment aspect on the quality of life of informal workers. **Methods:** The study was an explanatory research with quantitative methods. The data was analysed using descriptive analysis and inferential statistics using multiple linear regression analysis. **Results:** The total population of the study was 130 informal workers in Medan City and the sample used was 55 informal workers. The results of this study proved that all variables in the aspects of the physical and non-physical work environment affect the quality of life of informal workers. **Conclusion:** It is recommended for informal workers to have better understanding on the work environment which may affect their health status and lead to work-related diseases in the future.

Keywords: Physical work environment, Non-physical, Quality of life

EOHOP 17

Association between Policy on Personal Protective Equipment (PPE) and the Use of PPE among Inpatient Nurses at the Binjai Army Hospital

Lisbeth Tambunan[1],*, Gerry Silaban[1], Namora Lumongga Lubis[2]

[1] Department of Occupational Safety and Health, Faculty of Public Health, Universitas Sumatera Utara, Jalan Universitas No.21 Kampus USU Padang Bulan Medan 20155, Medan, Indonesia
[2] Department of Health Promotion and Behavioral Science, Universitas Sumatera Utara, Jalan Universitas, No.21 Kampus USU Padang Bulan Medan 20155, Medan, Indonesia

*Corresponding author: drlisbethtambunan@gmail.com

ABSTRACT

Introduction: Healthcare-associated infections (HAIs) are important health problems worldwide as well as in Indonesia. The average incidence of HAIs in the world is 4-10%. HAIs requires high medical costs and threaten patients and families, as well as health workers. One strategy to prevent disease transmission is by using personal protective equipment (PPE). The reduction of HAIs incidence will reduce the budget for antibiotics. This research was carried out to analyze the association between policy of PPE and the use of PPE among inpatient nurses at Binjai Army Hospital. **Methods:** This study was of cross-sectional design. The population involved was all inpatient nurses, and the sample included 41 inpatient nurses via purposive sampling. The independent variable in this study was the policy that included PPE regulations, PPE training, rewards and punishment for the use of PPE. The instruments used to measure the policy of PPE and the use of PPE were questionnaires, observations and interviews with nurses. Bivariate analysis was used using Chi-square test with a significance level of $\alpha = 0.05$. **Results:** The results showed 51.2% nurses stated that the enforcement of the policy related to the PPE regulations, PPE training, rewards and punishment for the use of PPE did not work well. Based on Chi-square analysis, there was a significant association between the policy of PPE and the use of PPE among inpatient nurses at Binjai Army Hospital. **Conclusion:** There was a significant association between the policy of PPE and the use of PPE among inpatient nurses at Binjai Army Hospital.

Keywords: HAIs, Policy, PPE, Nurse, Budgeting

EOHOP 18

Environmental Health Risk Assessment of PM10 Post Mount Kelud Eruption

Novika Haryanti Br Purba* , Nurmaini, Taufik Ashar

Department of Environmental Health, Faculty of Public Health, Universitas Sumatera Utara, Jalan Universitas No.21 Kampus USU Padang Bulan Medan 20155, Indonesia

*Corresponding author: novikaharyantipurbag@gmail.com

ABSTRACT

Introduction: The Mount Kelud eruption in East Java was preceded by an initial phreatomagmatic eruption followed by a magmatic eruption which resulted in pyroclastic flow and falling pyroclastic. Research and observation of PM_{10} on Mount Kelud is done to determine the impact on the environment and humans. The study aimed to find out the environmental health risk analysis through evaluation on the table to see the level of risk of exposure to PM_{10} after the eruption of Mount Kelud in East Java. **Methods:** This study was a quantitative descriptive study using an analysis of environmental health risks through an evaluation on the table to see the level of risk of PM_{10} exposure after Mount Kelud eruption In East Java. **Results:** The results of environmental health risk analysis through evaluation on the table showed that the risk characteristics (RQ) in the measurements carried out on February 16-21 2014 were 0.003. The risk characteristics of RQ in the February 17-21 2014 measurement are 0.001. **Conclusion:** Overall exposure risk characteristics (RQ) PM_{10} <1 means that exposure to *lifetime* has not been at risk of causing health effects on the UK around the eruption of Mount Kelud in East Java. It is recommended that residents use PPE when doing activities outside their homes, especially around the Kelud mountain area of East Java.

Keywords: Environmental health risk analysis , Mount Kelud Eruption, National air pollution standard index, ISPU, Particulate matter 10

EOHOP 19

Environmental Health Risk Assessment of Exposure to Hexavalent Chromium in Community Drinking Water in Tongging Village, Merek Sub District , Karo District

Gumanti

Department of Environmental Health, Faculty of Public Health, Universitas Sumatera Utara, Jalan Universitas No.21 Kampus USU Padang Bulan Medan 20155, Indonesia

*Corresponding author: manalugumanti@yahoo.co.id

ABSTRACT

Introduction: The source of drinking water for the community of Tongging Village is from mountain springs. In 2018, the monitoring report from the Environmental Health and Disease Control Department (BTKLPP) in Medan showed that some of the samples from 30 points of their source of drinking water were contaminated with hexavalent chromium metal. High concentrations of hexavalent chromium metal in drinking water can cause health problems such as damage to liver organs, kidneys, and lung cancer. The objective of this study was to assess the risk quotient (RQ) of hexavalent chromium metal exposure in the community drinking water in Tongging Village. **Methods:** This study used secondary data from the 30 water samples collected in 2018. Environmental Health Risk Assessment (EHRA) was carried out to measure the health risk to the community. The level of hexavalent chromium was measured by Atomic Absorption Spectrophotometry (AAS). **Results:** Out of the 30 water samples, nine (30%) were found to have hexavalent chromium level which exceeded the environmental quality standards of 0.5 mg/L. Five of the samples had risk quotient (RQ) of more than 1, whereby the mean value was 1.278, minimum values was 1.046 and the maximum value was 1.627. **EPIDEMIOLOGY** This study showed that the source of drinking water in Tongging village needs to be treated to reduce or eliminate hexavalent chromium to protect the health of the community.

Keywords: ARKL, Hexavalent chromium exposure, Drinking water

EPIDEMIOLOGY ORAL PRESENTATION

EPIOP 01

Meta-Analysis of Cross-sectional Study: Relationship between Duration of Sleep and Hypertension in Adult

Simon*, Fazidah Siregar, Etti Sudaryati

Faculty of Public Health, Universitas Sumatera Utara, Jalan Universitas No. 21 Kampus USU Padang, Bulan Medan 20155 Indonesia

*Corresponding author: simon.elsa@yahoo.com

ABSTRACT

Introduction: High blood pressure is one of the leading risk factor for global mortality. High blood pressure is a major risk factor for coronary heart diseases and ischemic as well as hemorhagic stroke. Epidemiologic studies have shown that chronic short duration sleep may be associated with hypertension. The purpose of this analysis was to examine the relationship between duration of sleep and hypertension by reviewing the meta-analysis. **Methods:** Research articles sourced from Proquest, Google, Ebsco, Cohrane, and PubMed those published in 2005–2019. Seven articles were selected from 111 relevant articles based on the inclusion and exclusion criteria of the output compatibility and suitability of the cross sectional design. Seven articles that have been included were reviewed in meta-analysis to see the overall effect size of Odds Ratio hypertension. Sleep duration categories were < 7 hour, 7-8 hour, and > 8 hour every day. Prevalence or incidence of hypertension in each sleep category were extracted. **Results:** The overall effect size of Odds Ratio were obtained from seven articles after the meta analysis process. The overall effect size of Odds Ratio for hypertension of individual who slept < 7 hour compare to slept 7-8 hour 95 % CI =1.36 (1.08-1.71) with P value= 0.009 < 0.05; those who slept > 8 hour compare to slept 7-8 hour 95 % CI =1.32 (1.00-1.73) with P value=0.05. **Conclusion:** There is a significant relationship between short sleep duration and hypertension.

Keywords: Sleep duration, Hypertension, Meta analysis, Cross sectional study, Epidemiologic study

EPIOP 02

Relationship of Breeding Place Eradication Frequency and Larva-Free Index With Incidence of Dengue Hemorrhagic Fever in January-December 2018 in Kecamatan Medan Helvetia and Medan Barat

Venny Melinda Nasmita*, Nurmaini, Fazidah Aguslina

Faculty of Public Health, Universitas Sumatera Utara, Jalan Universitas No. 21 Kampus USU Padang, Bulan Medan 20155 Indonesia

*Corresponding author: venny.melinda204@gmail.com

ABSTRACT

Introduction: Dengue Hemorrhagic Fever is a communicable disease caused by dengue virus which is transmitted by Aedes Aegypti mosquitoes. Eradication of its breeding place and regular checks of the larva are the goverment's efforts in prevention of the vector-borne disease of dengue hemorrhagic fever. Medan city is one of the cities that is endemic with dengue hemorrhagic fever with the highest prevalence rate of 63.3% and a mortality rate of 0.69%. Kecamatan Medan Helvetia had the highest number of cases while Kecamatan Medan Barat had the lowest. This study aims to determine whether there is a relationship between the frequency of mosquito breeding places eradication and the results of the larva free-index carried out by health workers in the 2 Kecamatans. **Methods:** This study used ecology combination study design which was based on the place and time. Data analysis included univariate and bivariate analyses using correlation tests. **Results:** There was a significant relationship between breeding place eradication and the incidence of dengue hemorrhagic fever (p <0.001). However, there were no relationship between the free-larva index and incidence of dengue hemorrhagic fever (p = 0.800). **Conclusion:** The higher the frequency of eradicating mosquito breeding places, the higher the incidence of dengue haemorrhagic fever while having high or low larvae-free index does not necessarily affect the incidence of dengue fever. Therefore, there is a need for health workers to observe many houses according to the number of cases.

Keywords: Dengue hemorrhagic fever, Breeding place eradication, Larva-free index, Communicable disease, Frequency

Dengue Prevention Practices and Their Associated Factors among Wet Market in Hilir Perak District, Malaysia

Nur Intan Kartiniewatie Kamaruddin1, Salmiah Md Said*, Hayati Kadir@Shahar, Lim Poh Ying

Department of Community Health, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia, 43400, UPM Serdang, Selangor, Malaysia

*Corresponding author: salmiahms@upm.edu.my

ABSTRACT

Introduction: Wet markets are predisposed to Aedes breeding due to nature of daily activities that involve frequent water storage and usage of water collecting containers. Large numbers of visitors patronising wet markets could cause rapid spread of dengue infection. This study aimed to determine the level of dengue prevention practices among wet market traders in Hilir Perak District and their associated socioecological factors. **Methods:** A cross sectional study using stratified sampling method was conducted where 246 wet market traders were interviewed to collect data on dengue prevention practices (prevention of Aedes mosquitoes breeding and prevention of mosquito bites), and socioecological factors. Chi square test and logistic regression modelling were performed to identify socioecological factors associated with dengue prevention practices. **Results:** Response rate for this study was 88.9%. Majority of the respondents were male, above 40 years old, had secondary education and above, had monthly income of above MYR2000, were owner of the shop lots, was or had ever married and sold fish, vegetable or groceries products. Most of the respondents had high level of dengue prevention practices (78%). Those who were owner of shop lots, had high perceived susceptibility, high family support, and high perceived dengue prevention and control laws and regulations were predicted to have high level of dengue prevention practices. **Conclusion:** Level of dengue prevention practices is determined not only by individual factors, but also other factors from relationship to societal level which must also be considered in planning or evaluating current dengue control programmes.

Keywords: Dengue prevention practices, Socioecological model, Wet markets, Community participation, Health belief

EPIOP 04

Relationship between Mother's Height and Stunting among Under Five-Year- Old Children in Secanggang Sub-District

Dinda Dwi Khairani Jayusman*, Evawany Yunita Aritonang, Zulhaida Lubis

Department of Public Health Nutrition, Faculty of Public Health, Universitas Sumatera Utara, Jalan Universitas No. 21 Kampus USU Padang, Bulan Medan 20155 Indonesia

*Corresponding author: dinda_dkj@yahoo.com

ABSTRACT

Introduction: Stunting is one of the chronic nutritional problems characterized by linear growth disturbance that is not matched with age. Various factors are associated with stunting among children under five years old with one of them being mother's height. Thus, this study aimed to determine the relationship between mother's height and stunting among children under five years of age in Secanggang Sub-district. **Methods:** This study was an observational study with cross sectional design using a cluster sampling technique and took place in Secanggang sub-district with a total of 92 respondents. The height of the mothers and children aged between 24 and 59 months were obtained using the Microtoise height measurement and an infantometer was used to measure the length of the children aged 0 to 23 months. Data was analyzed using the Chi-Square test. **Results:** The prevalence of mothers categorized as short (height <150cm) was 32.6% and stunting among the children was 43.5%. There was no significant relationship between mothers' height and the incidence of stunting (p = 0.262). Mother's height is not directly related to the incidence of stunting as there are various other factors influence it. **Conclusion:** There is no relationship between mother's height and the incidence of stunting among children under five years old.

Keywords: Stunting, Mother's height, Children under five years old, Nutritional problem, Chronic nutritional

EPIOP 05

Factors associated with Physical Activity Barriers among Adult Community in Putrajaya

Mohd Tariq Mhd Noor, Hayati Kadir Shahar*

Department of Community Health, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia, 43400, UPM Serdang, Selangor, Malaysia

*Corresponding author: hayatik@upm.edu.my

ABSTRACT

Introduction: Prevalence of physical inactivity in the Federal Territory of Putrajaya on 2015 was 32.5% compared to 2011 with 56.5%, as reported in National Health Morbidity Survey. The public do not use the facilities as much as they should, although various facilities have been provided in Putrajaya and was selected as garden city concept town. The objective of this study was to determine the perceived barriers (personal, environmental, total barriers) of physical activity among Komuniti Sihat Pembina Negara (KOSPEN) community in Putrajaya. **Methods:** A cross sectional study was conducted using adopted self-administered Perceived Barriers questionnaires to assess the perceived barriers of physical activity with socio-demographics, economic and personal characteristic. An Independent t-test was used to test the association between independent variables with perceived barriers of physical activity. **Results:** There were significant association between personal barriers with marital status (p<0.001), household income (p=0.039), knowledge about health (p<0.001) and between total barriers score with marital status (p= 0.018), and knowledge about health (p=0.05). **Conclusion:** The results of this study can be used to design a health programme based on the appropriate domain. For future studies, it is proposed to make separate studies of predictor of each perceived barrier domain and to propagate independent variables to obtain more information.

Keywords: Adult community, Perceived barriers, Physical activity

EPIOP 06

Factors associated with Diabetes Knowledge among Communities in Sungai Petani

Nurul Iman Abdul Rahim, Hayati Kadir Shahar*, Ahmad Iqmer Nashriq Mohd Nazan

Department of Community Health, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia, 43400, UPM Serdang, Selangor, Malaysia

*Corresponding author: hayatik@upm.edu.my

ABSTRACT

Introduction: Diabetes is a global epidemic and the public knowledge on this progressive disease is important to control the disease. This study aims to determine the diabetes knowledge of a community in Sungai Petani and the associated factors. **Methods:** A cross-sectional study using multi-stage sampling was carried out in Sungai Petani, Kedah, Malaysia between April to May 2019, by a validated and reliable questionnaire. Data was analysed using IBM SPSS version 25.0. Mann-Whitney U and Kruskal Wallis test were used. **Results:** Of 370 non-diabetic adults participated in this study with majority of them were females (61.9%), Malays (79.2%), had at least secondary education (53.5%), married (78.6%), overweight (34.6%), not-hypertensive (80.8%), had no family history of diabetes (52.2%) and not-smoking (86.8%). The mean ±SD age was 46.1 ±13. And median (IQR) monthly income was RM3037.40 ±3005.90. The diabetes knowledge median (IQR) score was 26.0 (9.0). Half of respondents did not know about items on "the different types of diabetes", "diabetics should carry sweets when they are out" and "diabetics should not donate blood". Diabetes knowledge was found to have significant association with diabetes screening uptake, income level, education level, marital status, BMI, family history of diabetes and smoking. **Conclusion:** Diabetes knowledge among Sungai Petani community was found to be adequate but there is still misconception regarding diabetes and its management. Collective efforts should be taken to improve the general population's knowledge on diabetes.

Keywords: Diabetes, Knowledge, Screening, Malaysia

EPIOP 07

The Relationship between Alcohol Consumption Habits with Sleep Quality of Elderly in Deli Serdang Regency

Helena Pryadina Hutauruk*, Fazidah Aguslina Siregar, R. Kintoko Rochadi

Department of Epidemiology, Faculty of Public Health, Universitas Sumatera Utara, Jalan Universitas No. 21 Kampus USU Padang, Bulan Medan 20155 Indonesia

*Corresponding author: baikena@yahoo.com

ABSTRACT

Introduction: Sleep is a basic need for every individual. The elderly has decreased sleep quality due to various physical an physiological conditions. The elderly people in Deli Serdang Regency chose to consume traditional alcohol called *tuak* to overcome their problem of decreased sleep quality. Thus, this study aimed to determine the relationship between alcohol consumption habits and sleep quality among the elderly in Deli Serdang Regency. **Methods:** A cross-sectional study was conducted among 164 elderly in Deli Serdang Regency. The respondents were interviewed on their sleep quality and alcohol consumption. Sleep quality was measured using the Pittsburgh Sleep Quality Index (PSQI) questionnaire. **Results:** The results indicated that there was a significant association between alcohol consumption and sleep quality of the elderly (p-value=0.023). However, there was no association between gender and age with sleep quality. **Conclusion:** Elderly with alcohol consumption habits have poor sleep quality in terms of sleep disturbances and daytime dysfunction. Therefore, efforts to reduce or stop alcohol consumption should be in place.

Keywords: Elderly, Alcohol consumption, Sleep quality, *Tuak*

EPIOP 08

The Influence of Physical Activity and Smoking Habits on Stroke Occurrence at Santa Elisabeth Hospital Medan

Renova Suryani Panjaitan*, Fazidah Aguslina Siregar, Albiner Siagian

Department of Epidemiology, Faculty of Public Health, Universitas Sumatera Utara, Jalan Universitas No. 21 Kampus USU Padang, Bulan Medan 20155 Indonesia

*Corresponding author: renovasuryani@gmail.com

ABSTRACT

Introduction: Stroke is an important health problem in Indonesia and had been shown to be increasing in incidence. The increased occurrence of stroke can be contributed by unhealthy behaviors which include lack of physical activity and smoking habits. The aim of study was to determine the influence of physical activity and smoking habits on stroke occurrence at Santa Elisabeth Hospital Medan. **Methods:** This study used a case control study design. The total sample was 106, consisting of 53 people with stroke as the cases and 53 people without stroke as the controls. Purposive sampling was done to select the samples. Questionnaires were used to measures physical activity level (i.e. 24-hour recall) and smoking habits. Data was analyzed using multiple logistic regression. **Results:** The results showed that physical activity (p=0.01, Odds ratio (OR)=2.828, CI 95% 1.220-6.553) and smoking habits (p=0.02, OR=2.559, CI 95% 1.161-5.642) were significantly associated with stroke occurrence. **Conclusions:** It was concluded that those engaging in mild physical activity were estimated to be at 3 times higher risk to develop a stroke compared to those with moderate physical activities. People with smoking habits were estimated to have 3 times higher risk of developing a stroke compared to non-smokers. We recommed exercise and no smoking habits to reduce the risk of stroke occurence.

Keywords: Stroke, Physical activity, Smoking habits, Santa Elisabeth Hospital

EPIOP 09

Knowledge on Life-style Related Non-Communicable Disease (NCDs) among Indigenous People (*Orang Asli*) in Negeri Sembilan, Malaysia

Muslimah Ithnin, Mohd Dzulkhairi Mohd Rani*, Norsham Juliana Nordin, Mohd Azmani Sahar, Nadia Mohd Effendy, Khadijah Hasanah Abang Abdullah, Nadeeya 'Ayn Umaisara Mohamad Nor, Muhammad Shamsir Mohd Aris

Faculty of Medicine and Health Sciences, Universiti Sains Islam Malaysia

*Corresponding author: drdzulkhairi@usim.edu.my

ABSTRACT

Introduction: *Orang Asli* (OA) in Malaysia is considered vulnerable to social, economic and legal abuse. The increase in prevalence of Non-Communicable Diseases (NCDs) among OA was reported due to their lifestyle changes. Our study aimed to determine the level of knowledge on NCDs among OA community and its' association with demographic factors. **Methods:** A cross-sectional study by face-to-face interview was conducted among consented adult OA in Jelebu, Negeri Sembilan using a validated questionnaire. Their knowledge on risk factors, complications and treatment of cardiovascular diseases, diabetes mellitus, and chronic obstructive pulmonary diseases was asked. Respective thresholds and ranges for poor, moderate and good categories were set as 0-15, 15–21 and 21-28. Mann-Whitney and Kruskal-Wallis test was used to test the association between the demographic profile and knowledge score since the data was not normally distributed. **Results:** A total of 325 respondents with mean age 39.94 (±13.196) ranged from 18 to 83-year-old participated in this study. Majority were females (71.1%) with primary education (39.1%) and mean household income of RM 615.47 (± 446.79). Their mean knowledge score was 12.82 (±9.671). Majority of them had poor knowledge (51.7%). The respondents with higher education background had significantly better knowledge score compared to lower education background (p<0.001). **Conclusion:** Study shows that the level of knowledge on NCDs among OA is low and associated with level of education. Effective health intervention programs among OA can be one of the strategic methods to increase their knowledge on NCDs and eventually their health.

Keywords: Indigenous people, Knowledge, Malaysia, Non-communicable disease, Survey

EPIOP 10

Association of Sedentary Behavior and Obesity among Adolescents in Smun 7 Banda Aceh

Yuliana Asnita[1,]* , Evawany Yunita Aritonang[1] , Zulhaida Lubis[2]

[1] Department of Epidemiology, Faculty of Public Health, Universitas Sumatera Utara, Jl. Universitas No. 21, Kampus USU, Medan, 20155, Indonesia
[2] Department of Health Nutrition, Faculty of Public Health, Universitas Sumatera Utara, Jl. Universitas No. 21, Kampus USU, Medan, 20155, Indonesia

*Corresponding author: ananda.nita@yahoo.com

ABSTRACT

Introduction: The worldwide number of people who are suffering from obesity has increased sharply over the past decades. Obesity does not only occur in adulthood but also in childhood and adolescence. Many factors are associated with obesity, with minimal physical activity being one of the factors which leads to obesity in adolescents. The study was aimed to find out the relationship between sedentary behavior and obesity in adolescents at SMUN 7 Banda Aceh. **Methods:** This study was an observational analytic study of a case-control design. The study population was all students of class X and XI at SMUN 7 Banda Aceh. Samples were divided into two groups, namely cases with students who were obese and control groups with students who were of normal nutritional status. Sample size for the case was 50 students and the control were 100 students which totaled up to 150 students. Sampling was done using systematic random sampling technique. The research data were analyzed using univariate analysis and bivariate analysis. **Results:** The results showed that the variables associated with obesity were transportation to school (P= 0.027, OR = 2.852, CI 1.095-7.429), hanging out with friends (P = 0.001, OR = 3.273, CI 1.611-6.649), use of cellphone (P= 0.030, OR = 3.000, CI 1.072-8.394) and watching television (P= 0.012, OR = 2.488 CI 1.208-5.126). Variable with no correlation to obesity was watching DVD (P= 0.318, OR = 1.610 CI 0.629- 4.122). **Conclusion:** Adolescents who have high sedentary activities such as hanging out with friends, eased school facilities, and watching television have bigger risk of gaining obesity.

Keywords: Obesity, Sedentary, Watching, Television, Teenagers

EPIOP 11

Association of Knowledge, Contact History and Ventilation on the Risk of Pulmonary Tuberculosis in Padangsidimpuan City, North Sumatera

Suryani[1],*, Fazidah Aguslina Siregar[1], Wirsal Hasan[2]

[1] Department of Epidemiology, Faculty of Public Health, University of Sumatera Utara Universitas Sumatera Utara, Jl. Universitas No. 21, Kampus USU, Medan, 20155, Indonesia
[2] Department of Environment Health, Faculty of Public Health, University of Sumatera Utara, Jl. Universitas No. 21, Kampus USU, Medan, 20155, Indonesia

*Corresponding author: suryani90harahap@gmail.com

ABSTRACT

Introduction: Tuberculosis remains a global health problem. Indonesia ranked the second for tuberculosis cases among 30 high tuberculosis burden countries. In Padangsidimpuan city, the number of new tuberculosis cases had increased from 301 cases in 2015 to 351 cases in 2017. The aim of the study was to determine the association between knowledge, contact history, and ventilation with pulmonary tuberculosis in Padangsidimpuan city. **Methods:** A case control study was conducted among 56 cases and 56 controls. Cases were smear positive pulmonary tuberculosis patients diagnosed between June to October 2018. The control group consisted of their neighbours without tuberculosis symptoms. A set of questionnaire was used to collect information on knowledge, contact history and ventilation. The data were analyzed using multiple logistic regression. **Results:** The results showed that factors associated with pulmonary tuberculosis were poor knowledge (AOR=4.589; 95% CI: 1.364-15.441), contact history (AOR=3.680; 95% CI: 1.365-9.916), and ineligible ventilation (OR=2.942; 95% CI: 1.029-8.414). **Conclusion:** The risk of pulmonary TB increases with poor knowledge, contact history, and ineligible ventilation.

Keywords: Knowledge, Contact history, Ventilation, Pulmonary tuberculosis

EPIOP 12

Effectiveness of Islamic Rehabilitation Intervention Module (ISRIM) on Reduction of Relapses among Opioid Dependents in Felda Communities in Jengka, Pahang

Amir Faisal Mohd. Khairi[1,2], Hejar Abdul Rahman[1], Norsiah Ali[2] , Hayati Kadir Shahar[1,*]

[1] Department of Community Health, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia
[2] Ministry of Health Malaysia

*Corresponding author: hayatik@upm.edu.my

ABSTRACT

Introduction: Methadone Maintenance Treatment (MMT) is the commonly used intervention for opioid dependents among Malays in FELDA settlements. However, relapse is common. Since majority of Malays are Muslims, Islamic Rehabilitation Intervention Module (ISRIM) using Health Belief Model (HBM) can be implemented as an intervention for reduction of relapse among opioid dependents in FELDA community. The objective of this study were to develop, implement and evaluate the effectiveness of ISRIM in the reduction of relapse among opioids dependent Malay males in FELDA communities in Jengka, Pahang. **Methods:** A single blind, cluster randomized controlled trial utilizing simple randomization was conducted, involving 10 MMT clinics. Intervention group received ISRIM for one session per week for four consecutive weeks, while control group were put on wait-list. Outcome was relapse, measured monthly for 6 months follow-up by the positive urine for drugs rapid test. Generalized Estimating Equations (GEE) was used as the main effectiveness analysis. Intention-to-treat (ITT), per protocol (PP) analysis, interaction terms, construct terms and key assumption terms were utilized. **Results:** Individual participation rate was 88.3%. All group comparisons at baseline were not significant (p>0.05). Cumulative relapse after 6-months follow-up for intervention and control group was 13.8% and 31.2%. There was significant difference in relapse between baseline, post-intervention and 6-months follow-up within intervention and control group (Q=29.06 vs 61.39,p<0.001). ITT analysis revealed that receiving ISRIM (adjusted OR=3.29,95% CI=1.73,6.24, p<0.001) and timepoint (adjusted OR=5.37,95% CI=3.08,9.36,p<0.001) were the significant predictors of relapse after adjusting for other factors and clustering effect. **Conclusion:** ISRIM was effective in the reduction of relapse among opioid dependents.

Keywords: FELDA, Health Belief Model, Islamic Rehabilitation Intervention Module, Opioid dependence, Relapse

EPIOP 13

Relationship between Smoking Habits and Population Density with Pulmonary TB BTA Positive in Serdang Bedagai Regency, North Sumatra Province in 2019

Ika Dewi Purba*, Rahayu Lubis, Nurmaini

Department of Epidemiology, Faculty of Public Health, Universitas Sumatera Utara, Jalan Universitas No. 21 Kampus USU Padang, Bulan Medan 20155 Indonesia

*Corresponding author: ikadewi280781@gmail.com

ABSTRACT

Introduction: A 2018 statistic by World Health Organization (WHO) reported that Indonesia ranked second after India with incidence of pulmonary Tubercle Bacillus (TB) BTA positive. North Sumatra Province ranked fifth out of 34 provinces with most numbers of Pulmonary TB cases and Serdang Bedagai Regency ranked 8th out of 33 districts in North Sumatra with a total of 542 cases in 2017 and 820 cases in 2018. The purpose of this study was to analyze the relationship between smoking habits and population density with Pulmonary TB BTA Positive in Serdang Bedagai Regency. **Methods:** This study was an observational analytic research of a case-control design. Cases were pulmonary TB patients in primary health centers and controls were the neighbours of TB patients with negative BTA examination. The sample size of this study were 100 people with 50 cases and 50 controls. **Results:** The results found that 74% were smokers 72% of sample lived in highly dense population. Smoking habits have an odds ratio (OR =1.88, CI 95% 0.756-4.690) and a density factor odds ratio (OR= 7.67, 95% CI 2.61-22.54). **Conclusion:** The conclusion of this study is that smoking habit and high population density are risk factors for positive pulmonary TB BTA Positive.

Keywords: Smoking, Population density, Pulmonary TB

EPIOP 14

Intestinal Helminth Infections and Associated Factors among Pregnant Women in Langkat District, North Sumatera, Indonesia

Rini Aswita*, Fazidah Aguslina Siregar, Nurmaini

Department of Epidemiology, Faculty of Public Health, Universitas Sumatera Utara, Jalan Universitas No. 21 Kampus USU Padang, Bulan Medan 20155 Indonesia

*Corresponding author: rini_83@yahoo.com

ABSTRACT

Introduction: Intestinal helminth infection is health problem of tropical countries including Indonesia. Although intestinal helminth infections usually occurred in children, it can also be present in pregnant women. Intestinal helminth infections during pregnancy are associated with adverse outcomes including anemia, low birth weight and high prenatal mortality risk. This study aimed to determine the prevalence of intestinal helminth infections and associated factors among pregnant women in Langkat District. **Methods:** A survey was undertaken by using cross-sectional study. Stool samples form 175 pregnant women were screened microscopically using Kato Katz technique. A structured, interviewer administered questionnaire was used for collecting information on the risk factors. Epidemiological data was analysed using descriptive analysis and multiple logistic regression. **Results:** The overall prevalence of helminth infections was 17.2% (35 cases). Ascaris was the most prevalent (12%), followed by hookworm infestation (5.1%) and the lowest was Trichuris (1.7%). The unavailability of latrine (AOR=6.895, CI 95% 1.068-44.525), no hand washing with soap after defecation (AOR=6.311, CI 95% 1.214-32.797) and low family income (AOR=3.262, CI 95% 1.004-10.602) were significantly associated with the infection. **Conclusion:** This study showed high prevalence of intestinal helminth infections among pregnant women in the study area. Stool exam should be routinely performed during antenatal care visit. Health promotion and educational programs on personal and environmental hygiene should be implemented for the prevention and control of intestinal helminth infection in this study area.

Keywords: Behaviour, Environment, Helminth infection, Pregnant women, Risk factors

EPIOP 15

Hepatitis B Virus (HBV) and Hepatitis C Virus (HCV) Screening among Pregnant Women: A Systematic Review

Nur Farhana Mohamad[1,*], Izzuna Mudla Mohamed Ghazali[1], Junainah Sabirin[1], Tan Soek Siam[2], Rohani Jahis[3]

[1] Malaysian Health Technology Assessment Section (MaHTAS), Medical Development Division, 62590, Putrajaya, Malaysia
[2] Consultant Gastroenterologist and Hepatologist, Hospital Selayang
[3] Vaccine Prevention of Disease/Food and Water Borne Sector, Disease Control Division, Ministry of Health Malaysia

*Corresponding author: dr.nurfarhanamohamad@gmail.com

ABSTRACT

Introduction: Universal HBV and HCV screening among pregnant women is not a current practice in Malaysia. It is aimed to conduct a systematic review on available evidences in an effort to strengthen the national hepatitis screening programs. **Methods:** Systematic search was performed from databases; Medline, Cochrane, PubMed and IN-AHTA. Relevant studies according to inclusion/exclusion criteria were critically appraised and evidence graded. **Results:** From 782 titles identified, two systematic reviews, two retrospective cohort studies, two cross-sectional studies, one cost-utility analysis and one cost-effectiveness analysis were included. Universal antenatal HBV screening was associated with almost complete vaccination coverage for newborns. Replacing targeted screening with universal HBV screening was associated with increased identification of newborns indicated for HBV-immunization from 50% to 96%. Universal antenatal HBV screening had incremental cost-effectiveness ratio (ICER)s ranged from €2,032 to €26,181 per life year (LY) gained. As for HCV, targeted antenatal screening was associated with low HCV prevalence. Universal screening did not detect significantly more women with HCV infection than did targeted screening. One cost-effectiveness analysis found that universal antenatal HCV screening had ICER of €52,473 per LY gained and one cost-utility analysis reported ICER of 9,139 per QALY gained. **Conclusion:** Based on the above review, universal HBV screening in pregnant women is effective in increasing vaccination coverage for newborns. However, the ICERs had wide range. Therefore, local economic evaluation is needed to estimate cost implications before considering addition into national screening program. While for HCV, both universal and targeted screening in pregnant women had low detection rate thus high-risk approach screening is appropriate in Malaysia.

Keywords: Hepatitis B, Hepatitis C, Screening, Pregnant women, Pregnancy

EPIOP 16

Association of Nutrition and Lighting on the Risk of Pulmonary Tuberculosis in Samosir District, North Sumatera

Helpi Elfrida Sitanggang*, Fazidah Aguslina Siregar, Nurmaini

Department of Epidemiology, Faculty of Public Health, Universitas Sumatera Utara, Jalan Universitas No. 21 Kampus USU Padang, Bulan Medan 20155 Indonesia

*Corresponding author: helpi_ent@yahoo.co.id

ABSTRACT

Introduction: Pulmonary tuberculosis is an infectious disease that contributes to significant morbidity and mortality in Indonesia. In 2017, there was a total of 252 cases of pulmonary TB in Samosir District, with incidence rate of a smear-positive PTB of 126 per 100,000 population. Smear positive pulmonary tuberculosis has the potential to infect other people who live within the same environment. This study aimed to determine the association between nutritional status and lighting with smear positive pulmonary tuberculosis. **Methods:** A case-control study was conducted among 63 cases of smear-positive pulmonary tuberculosis and 63 controls without pulmonary tuberculosis. The cases were retrieved from the TB Registry at health centre in Samosir District. The cases were recruited from June 2018 to March 2019. Data was collected using interviewer-guided questionnaire. Simple logistic regression was used to compute the crude odds ratio for the association of nutritional and lighting with smear-positive pulmonary tuberculosis. **Results:** This study indicated that there was an association between poor nutrition status (crude OR = 5.474, 95% CI: 2.539, 11.802), and an ineligible lighting (crude OR = 6.689, 95% CI 3.014, 14.844) with the incidence of smear- positive pulmonary TB in Samosir District. **Conclusion:** There was an association between poor nutritional status and an ineligible lighting with smear-positive pulmonary TB in Samosir District. Among the intervention needed include strengthening the health promotion activities and supplementary feeding to TB patient.

Keywords: Nutritional status, Lighting, Pulmonary tuberculosis

EPIOP 17

Internalized Stigma among Urban Tuberculosis Patients in Selangor: The Prediction

Qudsiah Suliman[1,3], Salmiah Md. Said[1,*], Lim Poh Ying[1], Nor Afiah Mohd. Zukefli[1], Tan Kit-Aun[2], Alif Ramli[3], Benjamin Gan[4], Benedict Sim Lim Heng[5], Vijayan Munusamy[6]

[1] Department of Community Health, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia, 43400, UPM Serdang, Selangor, Malaysia
[2] Department of Psychiatry, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia, 3400, UPM Serdang, Selangor, Malaysia
[3] Ministry of Health, Malaysia
[4] Department of Internal Medicine, Hospital Tengku Ampuan Rahimah Klang
[5] Department of Internal Medicine (Infectious Disease), Hospital Sungai Buloh
[6] Department of Internal Medicine, Hospital Selayang

*Corresponding author: salmiahms@upm.edu.my

ABSTRACT

Introduction: Evidently, stigma has potentially prompted the negative outcome in Tuberculosis (TB) control through delayed diagnosis and poor adherence to treatment. Amidst accelerating treatment interruption in Selangor, little attention is paid to the quantitative assessment of stigma, thus warrant further characterisation of TB stigma in urban districts, Selangor. This study aimed to determine the predictors of internalised stigma among newly diagnosed PTB smear positive in urban districts, Selangor. **Methods:** A multi-centric longitudinal study recruited 345 newly diagnosed PTB smear positive patients who started TB treatment from November 2018 until June 2019. Baseline assessments utilised pre-tested self-administered questionnaire and standardised data collection form. Using IBM SPSS version 25.0, multiple linear regression was computed to determine the predictors. **Results:** The response rate was 84.7% with most of respondents were married and attained educational level up to secondary school. Other than low mean score of social support [mean (SD)=33.39(5.86)], the prominent findings were lacking knowledge of anti-TB side effect and wrongly perceived damaging effect of anti-TB drug to internal organ. The mean internalised stigma score was 24.88 (SD=4.70), which predicted by age, educational level (no formal education), employment status (retiree), alternative medicine practice, baseline symptoms score, perceived barrier, and social support, with entire group of variables significantly predicted TB stigma (F [9, 331] =21.476, p <0.001, adjusted R²=0.351). **Conclusion:** Stigma reduction intervention in TB management should focus on promoting social support and minimising barrier towards TB treatment.

Keywords: Internalized stigma, Predictors, Tuberculosis, Stigma, Treatment adherence

EPIOP 18

The Relation between Ecological Factor as well as Community's Behavior and Malaria Incidence at Kualuh Leidong District, Labuhan Batu Utara Regency, North Sumatera Province of Indonesia

Echo J. Sibarani*, Irnawati Marsaulina, Sri Malem Indirawati

Faculty of Public Health, Universitas Sumatera Utara, Jalan Universitas No. 21 Kampus USU Padang, Bulan Medan 20155 Indonesia

*Corresponding author: echoj.sibarani@yahoo.co.id

ABSTRACT

Introduction: Malaria constitutes a disease which is still a significant community health problem as it often occurs in extraordinary incidence, impacts on the quality of life and economy, and even causes death. Therefore, Malaria is considered as one of the global health priorities. Decreasing rates of malaria infection is one of the global commitments in the Millennium Development Goals (MDGs). Malaria infections are affected by the outdoor and indoor environment as well as the community's behaviour. This study aimed to investigate the relationship between ecological factors and community behaviour and the incidence of Malaria in the Kualuh Leidong District of the Labuhan Batu Utara Regency, North Sumatera Province of Indonesia. **Methods:** The study was a case control study involving a sample of 38 cases and 38 controls. Data was collected through interviews and questionnaires. Information elicited were the respondents' house location (i.e. whether it is close to the anopheles mosquito breeding place such as rice fields and lagoons), characteristics (i.e. age, sex, education, income, job), knowledge, behaviour, activity and support of health workers toward malaria spread. Data was analysed using univariate and bivariate analysis, specifically the Chi-Square test set at 95% confidence level. **Results:** The variables associated with the presence anopheles mosquito breeding close to the house location (p<0.001), but do not influence the malaria cases directly, are the habit of using mosquito nets (OR=3.573), the existence of bushes (OR=3.917) and installation of wire gauze on ventilation (OR=3.035). **Conclusion:** The dominant risk factors were not using mosquito nets, the presence of bushes and not using wire gauze on the ventilation.

Keywords: Ecological factor, Behavior, Malaria, Influence, Kualuh Leidongquency

EPIOP 19

Social Determinants of Hepatitis C Virus Infection among People Who Inject Drug in Negeri Sembilan

Azline Abdilah, Sri Ganesh Muthiah*, Hayati Kadir Shahar

Department of Community Health, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia, 43400, UPM Serdang, Selangor, Malaysia

*Corresponding author: sriganesh@upm.edu.my

ABSTRACT

Introduction: Hepatitis C virus (HCV) infection is a major leading cause of morbidity and mortality worldwide. Persistent HCV infection is associated with major liver complications such as liver failure, liver cancer and fatality. It is estimated that 5.6 million people who inject drugs (PWID) were chronically infected with HCV globally, meanwhile, 59% of those diagnosed as HCV in Malaysia were PWID. The objective of this study was to determine the social determinants of HCV infection among PWID in Negeri Sembilan, Malaysia. **Methods:** A cross-sectional study was conducted based on stratified proportionate to size sampling among registered Methadone Maintenance Therapy (MMT) clients with PWID attending health clinics in Negeri Sembilan from February 2018 to July 2018. All eligible respondents were randomly selected. Data were collected using an interviewer-guided questionnaire and was analysed using Statistical Package of IBM SPSS version 23. Independent T test and Chi-square test (χ^2) were used to determine the associations between the variables. **Results:** Majority of the respondents in this study were between 20 and 63 years of age, Malay (90.1%) and infected with HCV (89%). There was a significant association between the respondent's age ($p<0.001$), a lower education level ($p=0.022$) and HCV infection among PWID. **Conclusion:** Majority of PWID were infected with HCV. Age and lower education level were the social determinants of HCV infection among PWID in Negeri Sembilan.

Keywords: Hepatitis C virus infection, People who inject drug, Social determinants, Malaysia

HEALTH MANAGEMENT AND HEALTH PROMOTION ORAL PRESENTATION
HMPOP 01

Prevention of Degenerative Diseases through Physical Activities in the Early Age

Liliana Puspa Sari*, Heru Santosa, Kintoko Rochadi, Rahayu Lubis

Faculty of Public Health, Universitas Sumatera Utara, Jalan Universitas No. 21 Kampus USU Padang, Bulan Medan 20155 Indonesia

*Corresponding author: lili.binaguna@gmail.com

ABSTRACT

Introduction: Degenerative diseases arise due to the main contributors such as regulating patterns of activity or health with habits of consuming excessive food, smoking, alcohol, stress, environmental pollution, and lack of physical activity. Symptoms of degenerative diseases based on Health Research data in 2018 revealed that symptoms occurred since the age of 15 and is considered as early adulthood. Symptoms obtained by early adulthood were stroke, hypertension, diabetes mellitus, and obesity. **Methods:** Qualitative method was used. The problems discussed were to describe a situation or phenomenon with naturalistic characteristics based on the actual setting. **Results:** The results showed that physical activity contributes to the prevention of degenerative diseases by studying the creation of cardiac work which is influenced by the respiratory system (cardiovascular work). Cardiovascular work is trained through the work of the body where the heart trained to drain blood normally and avoid damage to the respiratory system and body cells and prevents the occurrence of degenerative diseases. **Conclusion:** Physical activity in early adulthood as prolongs life expectancy if carried out regularly and systematically which can provide stimuli for physical, spiritual, and social functional development, especially in anatomical-anthropometric structures and physiological functions so as to prevent the occurrence of degenerative diseases.

Keywords: Prevention, Degenarative, Physical activity

HMPOP 02

Assessment of Adolescent-Friendly Health Services in Northeastern Malaysia: A Sequential Explanatory Mixed Method Study

Hafizuddin Awang[1],*, Azriani Ab Rahman[1], Surianti Sukeri[1], Noran Hashim[2], Nik Rubiah Nik Abdul Rashid[3]

[1] Department of Community Medicine, School of Medical Sciences, Universiti Sains Malaysia,
[2] Maternal and Child Health Unit, Kelantan State Health Department
[3] Adolescent Health Sector, Family Health Development Division, Ministry of Health

*Corresponding author: drhafizuddin@moh.gov.my

ABSTRACT

Introduction: The Ministry of Health Malaysia introduced the national best practices for adolescent-friendly health services in 2018 and it served as an assessment tool in the accreditation of adolescent-friendly clinic status. This study was conducted in Kelantan with the objective to determine the proportion of adolescent-friendly clinics and its determinants and perceptions of healthcare providers regarding the facilitating factors in providing adolescent-friendly health services. **Methods:** The research design was sequential explanatory mixed method. State wide clinics assessment was done to estimate the proportion of adolescent-friendly clinics and to determine the factors associated with adolescent-friendly health services provision. Perceptions of healthcare providers on the facilitating factors for adolescent-friendly health services were explored through in-depth interviews. Descriptive statistics and linear regression analysis were performed for quantitative data, and thematic analysis for qualitative data. **Results:** Out of 85 health clinics, 30 (35.3%) clinics were accredited as adolescent-friendly. Availability of trained healthcare providers in adolescent health modules, private room for adolescent counselling, dedicated team in charge of adolescent programme and adolescent health promotional activities were the statistically significant determinants for adolescent-friendly health services (p<0.05). The facilitating factors that were required in the provision of adolescent-friendly health services were; 1) organizational support, 2) self-commitment and interest, 3) clinic settings and 4) capacity building. The qualitative findings reaffirmed those of the quantitative study on the significant determinants required for adolescent-friendly health services. **Conclusion:** Adolescent-friendly clinics in Kelantan are still scarce. Eliciting the required facilitating factors could further improve the quality of adolescent health services in Malaysia.

Keywords: Facilitating factors, Adolescent-friendly health services, Mixed method study

HMPOP 03

Acculturative Stress and Intention to Dropout From the University Among New Postgraduate International Student in Public Universities, Malaysia

Musheer AL-Jaberi[1], Muhamad Hanafiah Juni[1,*], Hayati Kadir Shahar[1], Siti Irma Ismail[2]

[1] Department of Community Health, Faculty of Medicine & Health Sciences, Universiti Putra Malaysia
[2] Department of Psychiatry, Faculty of Medicine & Health Sciences, Universiti Putra Malaysia

*Corresponding author: hanafiah_juni@upm.edu.my

ABSTRACT

Introduction: With the increasing number of international students joining various universities worldwide, including Malaysia, acculturative stress resulting from their attempts to adjust to the cultures of host countries is one of the most challenging issues affecting their life in general and academic life in particular. The purpose of this study is to determine the level of acculturative stress and intention to dropout among new postgraduate international students in public universities, Malaysia. **Methods:** a cross-sectional study was conducted among 522 new international post-graduate students joining Malaysian public universities on their first semester. A multistage sampling method was adapted, and data were collected via self-administered questionnaire by using a validated questionnaire. **Results:** Out of the overall number of 522 respondents, (68.60%) of them were males while (31.40%) were females, the mean age of respondents was 28.95 ±5.91 years. The majority of the participants 60.54% (326) were single, whereas those who are married students represented 205 (39.3%). This study showed that 410 (78.5%) of the new postgraduate international students experienced a moderate level of acculturative stress with a median value of 107.00, while 63 (12.1 %) high level of stress and 49 (4.9 %) experience low level of acculturative stress .Consequently224 ,42.1 % of the participants students they have intention to dropout from the university for any reason , while 298 (57.1 %) they don't have any intention to dropout from the university **Conclusions:** This study showed the importance of educational intervention program among new international postgraduate students towards adapting to the Malaysian culture, in relation with increasing their cultural knowledge and interaction with host nationals and to reduce their acculturative stress and their intention to dropout from the university.

Keywords: Acculturative stress, International students, Intention to dropout

HMPOP 04

Stunting and Household Food Expenditures between Junior High School Students from Smoker and Non-Smoker Famillies

Risky Malinda*, Etti Sudaryati, Evawany Aritonang

Faculty of Public Health, Universitas Sumatera Utara, Jalan Universitas No. 21 Kampus USU Padang, Bulan Medan 20155 Indonesia

*Corresponding author: riskymalinda95@gmail.com

ABSTRACT

Introduction: Stunting is failure of linear height growth due to long term insufficient nutrient intake. The greater the proportion of household food expenditure from the total income, the lower the economic level of the family so it is at risk of food insecurity. Stunting is risky for smoker families because of the cost of cigarettes which should be allocated for household food but spent on cigarette. This study aimed to determine the differences in the proportion of stunting and household food expenditure between students from smokers and non-smokers families. **Methods:** This study was an observational study using cross sectional design with sample size of 60 students consisting of 30 students from smoker families and 30 students from non-smoker families. Stunting data was obtained by measuring the student's height then compared to the reference population height. The proportion of household food expenditure data was obtained by comparing the total household expenditure spent on food with the total income earned for a month. This study used statistical analysis using the chi-square test. **Results:** There is a difference in the proportion of stunting (p = 0.017) and proportion of household food expenditure (p = 0.000) between students from smoker families and non-smoker families where the high proportion of stunting and household food expenditure is more common among smoker families. **Conclusion:** There were differences in the proportion of stunting and household food expenditure in students from smoker families and non-smoker families. Families should limit cigarette consumption and allocate appropriately in household food expenditures.

Keywords: Stunting, Household food expenditure, Smoking status, Adolescents, Family

HMPOP 05

Relationship between the Food Choices Behaviour in Instagram and Food Intake of Young Adults in Kecamatan Medan Selayang

Selvi Karmila*, Evawany Y. Aritonang, Etti Sudaryati

Faculty of Public Health, Universitas Sumatera Utara, Jalan Universitas No. 21 Kampus USU Padang, Bulan Medan 20155 Indonesia

*Corresponding author: selvikarmila21@yahoo.com

ABSTRACT

Introduction: Developments in technology and culinary tourism have inspired social media users to widely share information. Recommendations from food bloggers are often used as reference, source of information, and food references through Instagram culinary accounts. The usage of Instagram as the enforceability in choosing food can transform someone's food intake. This study aimed to determine the relationship between the food choices behavior in Instagram and the food intake of young adults. **Methods:** This was a cross-sectional study design with 100 samples aged between 18 and 29 years. Data were collected through questionnaires containing questions regarding healthy and unhealthy food choices. The data of daily food intake was obtained through the 24-hour food recall. Data was subsequently analyzed using the Chi-Square statistical test. **Results:** There was a significant relationship between food choices in Instagram and eating behaviour of young adults ($p<0.05$). There was a relevant connection found on the calorie sufficiency ($p<0.001$), carbohydrate ($p<0.002$), protein (0.001), fat ($p<0.001$), Vitamin A ($p<0,003$), Vitamin C ($p<0.017$), and Iron ($p<0,013$). **Conclusion:** There is a significant relationship between food choice behavior in Instagram and food intake of young adults. This is due to the tendency of young adults to ignore the nutrients in the foods of choice and instead select foods that contain higher calories rather than higher fiber. It is necessary for young adults to consider choosing food with high nutrients as well as considering the health factors.

Keywords: Food choices behavior, Social media, Instagram, Food intake, Young adult

Parent's Knowledge on Healthy Lifestyle for Children Under-5 Years

Amy NurDiyana Mohamed Nasir*, Aminah Bee Mohd Kassim

Family Health Development Division, Ministry of Health, Malaysia

*Corresponding author: amydiyana31@gmail.com

ABSTRACT

Introduction: Obesity, a major risk factor for chronic disease, is a growing problem in Malaysia. Current data from the National Health Morbidity Survey (NHMS) shows that prevalence of overweight for children under five years has increased from 6.5% (NHMS 2011) to 7.6 % (NHMS 2015). Childhood obesity needs to be addressed as studies also have shown that childhood obesity contributes to adult chronic disease.   Increase in chronic diseases will cause an increase in health care cost. Intervention programmes are available and currently target schoolchildren and adults. No programme yet targeting at children under five years. This survey was conducted to understand parents level of knowledge with regards to healthy lifestyle among children under-5 years. **Methods:** Parents attending Health Clinics in the state of Perak were given self-administered questionnaire. **Results:** Twenty two (22) Health Clinics from 11 districts in Perak were involved in the survey. A total of 600 parents or care givers participated. Majority were unaware of good sleep hygiene and screen time limitation. **Conclusion:** Awareness of healthy lifestyle for children under 5 years has not been given due attention. Health intervention via promotion is needed for prevention of obesity.

Keywords: Obesity, Under 5 years, Health intervention, Lifestyle, Knowledge

HMPOP 07

Gaming Disorder and Its Correlation with IQ and Academic Potential Test

Irna Minauli*, Heru Santosa, R. Kintoko Rochadi, Zulfendri

Faculty of Public Health, Universitas Sumatera Utara, Jalan Universitas No. 21 Kampus USU Padang, Bulan Medan 20155 Indonesia

*Corresponding author: irna_minauli@yahoo.com

ABSTRACT

Introduction: According to the Indonesia Millennial Report (2019), 70% of millennial accessed digital media to obtain the most current news and 40.7% downloaded online game into their smartphone. This is of a significant public health concern because of the negative health consequences of gaming disorder, which was mentioned by WHO in 2018 as a mental health issue. **Methods:** This was a cross-sectional study. The total sampling of participants consisted of 249 students (114 male; 135 female) from ninth grade who participate for selection program for SMA Negeri 2 Plus, Sipirok. The gaming disorder scale used was modified from Young's Internet Addiction Test. The academic potential test was compiled by Ganesha Operation, a professional tuition center. The IQ was measured using Cultural Fair Intelligence Test (CFIT). **Results:** Results showed that they had mild level of addiction (M=33.64;SD=13.07), average level of IQ (M=94.25; SD=12.75) and below average level of academic potential test (M=41.32; SD=10.66). Pearson correlation showed that there was no significance correlation between Gaming Disorder and IQ (r=0.104>p=0.05) and between Gaming Disorder with Potential Academic Test (r=-0.105>p=0.05). There was only a small amount of effective contribution from Gaming Disorder that affected IQ and Academic Potential Test (R2=0.011). **Conclusion:** Other factors which affect gaming disorder can be further explored, such as, salience, excessive use, anticipation, lack of control, and neglect social life.

Keywords: Gaming Disorder, IQ, Academic Potential Test, Millennial, Students

HMPOP 08

Level of Life Satisfaction of Street Sweeper Workers in Medan City

Umi Salmah[1],*, Harmein Nasution[2], Surya Utama[1], Taufik Ashar[1]

[1] Faculty of Public Health, Universitas Sumatera Utara, Jl. Universitas No. 21, Kampus USU, Medan, 20155, Indonesia
[2] Faculty of Industrial Engineering, Universitas Sumatera Utara, Jl. Universitas No. 21, Kampus USU, Medan, 20155, Indonesia

*Corresponding author: umisalmah@usu.ac.id

ABSTRACT

Introduction: Based on results of surveys in 2017, the index of happiness of Indonesians was 70.69 on a scale of 0 to 100. In North Sumatra, the index was 68.41 with a second lowest national ranking in terms of their life satisfaction scale. Life satisfaction refers to the sense of satisfaction in life indicated through the fulfilment of the needs and desires of a person. This research aimed to look at the level of life satisfaction of road sweeper workers in the city of Medan. **Methods:** This is a descriptive cross-sectional study involving 260 samples calculated using the Slovin formula based on a population of 815 people. Data was obtained through a questionnaire that had been tested for validity and reliability. **Results:** In terms of the characteristics of the respondents, 65.5% were between 25-45 years of age, 42.3% had junior high school education, and 40.4% had worked between 5-10 years. It was found that majority of the workers were satisfied with good quality of life (77.7%), good old day guarantee (73.5%), work meeting their financial needs (71.9%), good health quality (78.1%), good living conditions (72.3%), good quality of sleep (79.6%), positive values in the community (63.8%), guaranteed job in the future (67.7%), and good social relations (65.0%). However, only 39.2% felt their financial is sufficient, 47.7% felt they had good ability to manage negative feelings and 41.5% felt they had sufficient free time. Overall, 74.2% of the workers had good level of life satisfaction while 23.5% had sufficient level of life satisfaction. Only 2.3% had less level of life satisfaction. **Conclusion:** The level of life satisfaction is categorized as good among the workers. However, these results are only applicable to road sweeper workers.

Keywords: Happiness index, Level of life satisfaction, Quality of life, Quality of sleep, Sweeper

HMPOP 09

Determinants of Overweight and Obesity among Undergraduate Students Residing in Universiti Putra Malaysia

Zaahirah Mohammad*, Norliza Ahmad, Halimatus Sakdiah Minhat

Department of Community Health, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia, 43400 UPM Serdang, Selangor, Malaysia

*Corresponding author: zaahirah1166@hotmail.com

ABSTRACT

Introduction: Overweight and obesity among adults, especially young adults have been increasing for the past 20 years and is an emerging public health concern all over the world, including Malaysia. This study aims to explore the determinants of overweight and obesity among undergraduate students residing in Universiti Putra Malaysia. **Methods:** A cross-sectional study using random sampling was conducted in three residential colleges. Independent variables include socio-demographic factors, knowledge on physical activity and dietary intake, lifestyle (physical activity, dietary intake, sleep duration and quality and smoking status) and stress. Data was collected using a validated and reliable self-administered questionnaire and anthropometric measurement (weight and height were measured to determine body mass index). IBM Statistical Package for Social Science (SPSS) version 23 was used for data analysis. Multiple logistic regression was employed to find the determinants of overweight and obesity among the respondents. Significant level was set at less than 0.05. **Results:** A total of 494 respondents participated with 98.8% response rate. Overweight and obesity prevalence among the respondents was 38.1% with 22.9% and 15.9% of the respondents were overweight and obese respectively. The significant associated factors were age group of 24 years and above (AOR=2.671, p=0.04), male (AOR=1.818, p=0.04), Malay ethnicity (AOR=5.34, p=0.008) and Indian ethnicity (AOR=7.155, p = 0.018). **Conclusion:** Overweight and obesity prevalence among undergraduate students were more than one third. Programmes and policies should be directed to these high-risk groups as identified in this study.

Keywords: Overweight, Obesity, Undergraduate students, Prevalence, Ethnicity

Relationship between the Banjar Socio-cultural Factors and Genesis Stunting among Ages 6-24 Months in Seicanggang District, Langkat Regency

Sri henny Siregar*, Albiner Siagian, Etti Sudaryati

Faculty of Public Health, Universitas Sumatera Utara, Jalan Universitas No. 21 Kampus USU Padang, Bulan Medan 20155 Indonesia

*Corresponding author: sri_henny@rocketmail.com

ABSTRACT

Introduction: Stunting is still one of the nutritional problems faced by Indonesia since 2015. A high prevalence of stunted toddlers is found among the Banjar ethnics in the Langkat Regency. The community of Banjar ethnic has various socio-cultural nutritional practices such as eating taboos among pregnant women, feeding of newborns, and diet restrictions during the puerperium period. This study aims to describe the relationship between socio-cultural factors related to nutrition among the Banjar ethnic community and the incidence of stunting. **Methods:** This study was descriptive cross sectional study. It was carried out in the sub-district of Seicanggang, Langkat with a total sample of 60 toddlers selected through simple random sampling. The variables included in this study were family characteristics (education, parents' work, parents' income), the toddlers' characteristics (age, gender, birth weight, birth length), socio-cultural nutrition (during pregnancy, postpartum period, and toddlerhood), and the nutrition status of the toddlers. **Results:** This study showed that the prevalence of stunting among the toddlers in the Seicanggang District of Langkat Regency was 67%. A total of 27% of the respondents had socio-cultural nutritional practices during pregnancy, 30% during the puerperium period, and 10% during the infancy period. **Conclusion:** The stunting genesis in the sub-district of Seicanggang is related to socio-cultural factors. It is recommended that efforts are introduced to decrease the confidence in abstinence among the pregnant women, the pre-lacteal feeding in newborns, and the believe in abstinence during the postpartum period through routine counseling.

Keywords: Toddlers, Socio-cultural, Ethnic Banjar, Stunting

HMPOP 11

Patient Expectations of Doctor's Therapeutic Communication Behaviour in Medan City

Arfah Mardiana Lubis[1,*], Harmein Nasution[2], Zulfendri[1], Juanita[1]

[1] Faculty of Public Health, Universitas Sumatera Utara, Jl. Universitas No. 21, Kampus USU, Medan, 20155, Indonesia
[2] Faculty of Industrial Engineering, Universitas Sumatera Utara, Jl. Universitas No. 21, Kampus USU, Medan, 20155, Indonesia

*Corresponding author: arfah@usu.ac.id

ABSTRACT

Introduction: The patients' expectations of health services provided by doctors are services that are informative, humane, high quality, and follow the standards of the medical profession. Several studies have shown that the health services provided by doctors, especially the behaviour of doctors, have not met the patients' expectations. However, the patients' expectations of the doctors' behaviour in therapeutic communication in each stage of treatment is still unknown. Therefore, this study aimed to look at the patients' expectations related to that. **Methods:** This study was conducted in Medan City in May 2019. It was a qualitative research through methods of in-depth interviews involving 26 patients who were unsatisfied with a doctor's therapeutic communication. Thematic analysis was used to analyze the data. **Results:** The results revealed that the patients' expectations include greetings by the doctors when welcoming patients, the doctor not disseminating patient information to others, empathy by the doctor when listening to a patient, the doctor explaining the stages of treatment to patients in an interesting way, the doctor telling the patients to pray to God when discussing stages of treatment, and the doctor apologizing and promising to fix their communication after evaluations of their effective communication. **Conclusion:** The patients expect doctors to maintain good therapeutic communication in each stage of treatment to ensure that the patients feel accepted, comfortable, and heard, understand the stages of treatment, believe the treatment will be successful, and thus agree to carry out the treatment.

Keywords: Patient, Expectation, Doctor, Therapeutic communication, Behaviour

Implementation of Clean and Healthy Behavior (PHBS) among Households in Deli Serdang Regency

Toman Devita Sari Siburian*, Ida Yustina

Faculty of Public Health, Universitas Sumatera Utara, Jalan Universitas No. 21 Kampus USU Padang, Bulan Medan 20155 Indonesia

*Corresponding author: tomandevita@gmail.com

ABSTRACT

Introduction: Clean and Healthy Behavior (PHBS) is one of the governmental priority programs through public health centers and is part of the process of health development. Data from Health Service of North Sumatra Province in 2017 showed that only 49.22% households in North Sumatra who practised PHBS. Data from 2017 Deli Serdang District Health Profile showed only 58.53% of households have implemented clean and healthy behavior. The objective of this study was to describe the clean and healthy behavior in Deli Serdang Regency. **Methods:** This type of research is descriptive and uses univariate data analysis techniques. **Results:** Prevalence of PHBS practice among households were 9.05% at Pagar Jati public health center, 15.79% at Kenangan public health center and 21.77% at Galang public health center. Of the three public health centers, there were three indicators of PHBS which had the lowest value, namely eating less vegetables and fruits every day, lacking physical activity every day, and not smoking inside the house. **Conclusion:** The percentage of PHBS' scope in those three public health centers were lower than national percentage target (80%) in 2014-2019. It is recommended for health agencies in Deli Serdang Regency to carry out periodic counseling and socialization so that the community in Deli Serdang Regency plays an active role in conducting Clean and Healthy Life Behavior (PHBS).

Keywords: Clean and Healthy Life Behaviour (PHBS), Fruits, Physical activity, Smoking, Vegetable

HMPOP 13

Utilization of Local Food in the Prevention of Dental Caries among the Elementary School Children in the Fishing Community

Gema Nazri Yanti[1,] *, Ida Yustina[1], Ameta Primasari[2], R. Kintoko Rochadi[1]

[1] Faculty of Public Health, Universitas Sumatera Utara, Jl. Universitas No.32, Padang Bulan, Medan Baru, North Sumatra 20222, Indonesia
[2] Faculty of Dentistry, Universitas Sumatera Utara, Jl. Universitas No.32, Padang Bulan, Medan Baru, North Sumatra 20222, Indonesia

*Corresponding author: gemanazriyanti@yahoo.com

ABSTRACT

Introduction: There is a high incidence of dental caries in children and it is as high as 80% in the Bagan Serdang village of Pantai Labu Subdistrict, Deli Serdang Regency. It is a coastal village where the local economy is based on fisheries. Shrimp paste is also its main marine product. Investigation conducted by the Directorate of Nutrition, Ministry of Health indicates that the nutritional content in shrimp paste was high in calcium where 2306 mg of shrimp paste was equivalent to 16 times the calcium content of 100g of dietary milk. Calcium plays a role in the remineralization process to prevent dental caries. The aim of this study was to analyze the potential benefits of local food derived from shrimp paste in dental caries prevention among the school children in Bagan Serdang village. **Methods:** This preliminary study involves 85 school children aged between 8 and 12 old from public elementary schools in Bagan Serdang village. Caries risk assessment was evaluated using the Cariogram software, concentration of salivary calcium ion was measured using the Atomic Absorption Spectrophotometry (AAS), and calcium content of the shrimp paste was measured in the laboratory of Medan Industrial Research and Standardization Center (Baristand). **Results:** The Cariogram assessment showed that primary school children possessed high caries risk amounting to 54.12%. The concentration of calcium ion in saliva was found to be extremely low (0.75±0.32 mmol/L). Meanwhile, the results showed that the shrimp paste contained 1.54% (b/b) calcium, 11.7% (b/b) protein, 1431.5 mg/kg of phosphor and 0.40% (b/b) of total fat. **Conclusion:** Due to the high susceptibility of caries among the primary school children and low calcium concentration in their saliva, the highly available calcium-enriched shrimp paste can be used as a strategy to prevent dental caries among the school children in Bagan Serdang village.

Keywords: Shrimp paste, Caries, School children

HMPOP 14

Relationship of Body Mass Index and Blood Pressure with Quality of Life of Haemodialysis Patients in Medan Rasyida Kidney Hospital

Herly Nainggolan*, Rahayu Lubis, Gerry Silaban

Faculty of Public Health, Universitas Sumatera Utara, Jalan Universitas No. 21 Kampus USU Padang, Bulan Medan 20155 Indonesia

*Corresponding author: herlynainggolan@gmail.com

ABSTRACT

Introduction: Haemodialysis therapy performed in kidney failure patients can change the physical and psychological conditions of these patients. This is one of the factors that affect the quality of life in haemodialysis patients. Even though they will be doing haemodialysis therapy for the rest of their lives, it is important for them to have good quality of life in order for them to continue being productive. The aim of this study was to determine the relationship between body mass index and blood pressure with the quality of life of haemodialysis patients in Medan Rasyida Kidney Hospital in 2019. **Methods:** This study used a retrospective cohort method over a period of 6 months (September 2018 to February 2019). The population was all outpatient kidney failure patients who underwent haemodialysis therapy in the hospital. A total 120 patients were sampled through purposive sampling technique. Quality of life data was obtained using the KDQOLTM-36 questionnaire. **Results:** The results of the Chi-Square test showed that body mass index (p value = 0.037, Relative Risk = 2, 95% CI 1.085-3.688) and blood pressure (p value = 0.004, Relative Risk = 3.106, 95% CI 1.387-6.955) were associated with the quality of life of the hemodialysis patients. **Conclusion:** Based on the results of this study, it can be concluded that there is a significant relationship between body mass index and blood pressure with the quality of life of haemodialysis patients.

Keywords: Blood pressure, BMI, Haemodialysis, KDQOL, Quality of life

HMPOP 15

Environmental Influence and Intention to Quit Smoking among College Students

Muhammad Adil Zainal Abidin[1,2], Hayati Kadir Shahar[1,*], Rosliza Abdul Manaf[1]

[1] Department of Community Health, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia, Malaysia,
[2] Department of Community Medicine, Kulliyyah of Medicine, International Islamic University Malaysia, Malaysia

*Corresponding author: hayatik@upm.edu.my

ABSTRACT

Introduction: Secondhand tobacco smoke is a known carcinogen and has shown positive association with smoking status, susceptibility and cessation. Smoke free environment policy seem to reduce this exposure and influence intention to quit and frequency of quit attempts. Despite having a smoke free policy, smokers are still exposed to second hand smoke and this might influence their smoking behaviour and cessation. The objective of this study was to examine the association between environmental tobacco smoke exposures with intention to quit smoking among young adults in college with smoke free policy. **Methods:** Data were drawn from a cluster based randomised controlled trial in 10 government colleges in Selangor. Baseline characteristics of 160 college smokers were measured using adapted questionnaire. Intention to quit was measured using Transtheoretical Model and environmental influence of tobacco smoke exposure. **Results:** Majority of the smokers were male (99.4%), single (100%), of Malay ethnicity (94.4%) and Muslim (95.6%). Most of them are in pre-contemplation stage where they do not have any intention to quit (65.6%). On environmental influence, at work or college environmental exposure, majority were exposed between 1 to 2 hours (36.9%) and 3 to 8 hours (40.6%). On exposure at home or hostel, majority were exposed between 1 to 4 hours (44.4%) and 5 to 14 hours (21.9%). In terms of friend's exposures, majority have most of their friends smoking (68.1%). We found no statistically significant association between environmental influence and intention to quit smoking. **Conclusion:** Although we found no relationship, future research should examine the pathway between environmental influence and smoking behaviour.

Keywords: Environmental tobacco smoke, Quit intention, Smoking, Transtheoretical model, Young adult

HMPOP 16

Relationship between Family Support and Quality of Life among Type 2 Diabetes Mellitus Patients at Hospital Tk. IV 01.07.01 Pematangsiantar, North Sumatera

Erida Damanik*, Rahayu Lubis, Erna Mutiara

Department of Epidemiology, Faculty of Public Health, Universitas Sumatera Utara, Jalan Universitas No. 21 Kampus USU Padang, Bulan Medan 20155 Indonesia

*Corresponding author: eridadamanik@yahoo.co.id

ABSTRACT

Introduction: Diabetes mellitus (DM) is one of the non-communicable diseases in which its management requires adherence and the ability to self-regulate to prevent complications and negative impacts on the quality of life. Therefore, family support is needed to improve the quality of life of DM patients. This study aimed to determine the relationship between family support and quality of life of type 2 diabetes mellitus patients. **Methods:** A cross-sectional study was conducted among 212 diabetes mellitus patients at the outpatient clinics of Hospital Tk. IV 01.07.01 Pematangsiantar. **Results:** Family support (p=0.01), education level (p=0.03) and gender (p= 0.04) has a significant relationship with quality of life of Type 2 diabetes mellitus patients. **Conclusion:** Family support is related to the quality of life of patients with Type 2 diabetes mellitus. Hospitals are expected to provide health promotion and health education to families in order to improve the quality of life of people with DM.

Keywords: Diabetes mellitus, Family support, Quality of life

HMPOP 17

Psychological Insulin Resistance: Do Individual Factors Play an Important Role Among Type 2 Diabetes Patients?

Chia Yee Kang[1,2], Salmiah Md Said[1,]*, Rosliza Abdul Manaf[1]

[1] Department of Community Health, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia,   43400 UPM Serdang, Selangor, Malaysia
[2] Ministry of Health Malaysia

*Corresponding author: salmiahms@upm.edu.my

ABSTRACT

Introduction: Psychological insulin resistance is the reluctance of diabetes patients or physicians to initiate or intensify insulin therapy. The insulin usage among Malaysian type 2 diabetes mellitus (T2DM) patients is low, only 21.4% of audited T2DM patients were on insulin therapy despite 76.2% of the audited T2DM patients had poorly controlled diabetes with HbA1c $\geq$ 6.5% in year 2012. This study aims to identify the predictors of psychological insulin resistance (PIR) among insulin naïve T2DM patients. **Methods:** A cross-sectional study using interviewer assisted questionnaires was conducted among adult insulin naïve T2DM patients in government health clinics at a district of Penang, Malaysia. Insulin Treatment Appraisal Scale (ITAS) was used to assess the dependent variable (PIR) and validated self-developed questionnaires were used for assess the independent variables (socio-demographic characteristics, diabetes profile, and individual factors). Multiple linear regression analysis was performed to identify the predictors of PIR. **Results:** As high as 72.7% out of 385 participants were reluctant to initiate insulin therapy. Emotional factors (fears), perceived personal failure and perceived severity significantly predicted higher PIR whereas perceived benefit and self-efficacy significantly predicted lower PIR. Total 49.8% variability of PIR was explained by the entire individual predictors (R2=49.8%, p = 0.001). Emotional factor was the strongest predictor. **Conclusion:** This study revealed a high level of PIR among Malaysian T2DM patients. It is vital to tackle the predictors that predict high PIR and strengthen the predictors that lead to low PIR in our health education and health intervention programs.

Keywords: ITAS, Predictor, Psychological insulin Resistance, Refuse insulin initiation, Type 2 diabetes mellitus

HMPOP 18

A Qualitative Study on the Quality Of Life Among Batakness Housewives Infected with HIV in HBKP AIDS Ministry Balige North Sumatera

Marika Julina Hutabarat[1]*, Rahayu Lubis[1], Erna Mutiara[2]

[1] Department of Epidemiology, Faculty of Publich Health, Universitas Sumatera Utara, Jl. Universitas No.21, Campus USU, Medan, North Sumatera
[2] Department of Biostatistics, Faculty of Publich Health, Universitas Sumatera Utara, Jl. Universitas No.21, Campus USU, Medan, North Sumatera

*Corresponding author: marikahutabarat@gmail.com

ABSTRACT

Introduction: HIV continues to be a major global public health issue. According to UNAIDS, more than 1.7 million women in Asia are living with HIV and 90% were infected by their husbands or sexual partners. The Huria Batak Kristen Protestan (HKBP) AIDS Ministry, a church committe that handles HIV-AIDS cases, claims that there were 603 people living with HIV and 138 have died from HIV-related causes. Out of these cases, 6.8% were among the Batak housewives. As people living with HIV-AIDS (PLHAs), they not only have to deal with the implications of the disease, but also the discriminatory social stigma. This stigma and discrimination often causes a decline in the quality of life (QOL) of those housewives. The aim of this study was to determine and explore the QOL among the Batak housewives with HIV taking antiretroviral (ARV) therapy in terms of the physical, social, psychological and environmental aspects. **Methods:** A qualitative study method (cases study design) with 7 informants who take ARV therapy for more than a year was conducted between January and May 2019. Data was gathered by conducting in-depth interviews and documentary study and analyzed using content analysis. **Results:** The physical aspect of QOL was good because the subjects realized the importance of maintaining their physical health by taking their ARV medications on time in order to prevent opportunistic infections. Social, psychological and environmental aspects of their QOL were low where the results showed that these housewives lack social and spiritual relationships and social support from families and surrounding people. This illustrates that there is still a lot of stigma and discrimination experienced by the housewives. **Conclusion:** Negative stigma and discrimination were still experienced by the Batak housewives with HIV which had an impact on their low quality of life.

Keywords: Quality of life, Housewives with HIV, HIV infection, HKBP AIDS Ministry

HMPOP 19

Knowledge and Performance of Occupational Safety and Health Officers in Basic Health Service

Isyatun Mardhiyah Syahri[1,]*, Badaruddin[2], Surya Utama[1], Zulfendri[1]

[1] Faculty Public Health, Universitas Sumatera Utara, Jl. Universitas No. 21, Kampus USU, Medan, 20155, Indonesia
[2] Faculty of Social and Political Sciences, Universitas Sumatera Utara, Indonesia

*Corresponding author: iissyahri@gmail.com

ABSTRACT

Introduction: Occupational accidents and diseases are one of the key performance indicators in implementing occupational safety and health (OSH) efforts. According to the Ministry of Health in 2017, only 35.65% of health centres implement occupational health efforts from the 50% targeted. Limited OSH knowledge presents an urgent problem in carrying out occupational health efforts in the city of Medan. Although specific research on OSH performance at present exists, the analysis of the personal performance of OSH officers with the health centre locus is however extremely limited. This study aims to analyse the effect of knowledge on the performance of health centre OSH officers in Medan City. **Methods:** This cross-sectional study was conducted among 72 OSH officers in the health centres. Data were collected using a questionnaire and the statistical tests used was multiple linear regression. **Results:** The findings of simultaneous analysis of knowledge about hazard identification, knowledge of occupational diseases and knowledge of accident prevention revealed a positive and significant effect on performance (p < 0.001). Further analysis showed that knowledge about hazard identification (p = 0.014) and knowledge on occupational diseases (p = 0.007) had significant effects on performance. However, knowledge on accident prevention had no effect on performance (p = 0.090). **Conclusion:** Poor knowledge will result in suboptimal performance. It is recommended to increase the knowledge of officers through OSH training carried out by the Medan City Health Service.

Keywords: Knowledge, Performance, Occupational Safety and Health, OSH Officers, Health centre

POSTER PRESENTATION

PP 01

A Study on Knowledge, Attitude and Practice of Family Planning among Doctors and Nurses in Petaling District

Nor Fadilah Othman[1,]*, Hamidah Amin Abd. Latip[2], Fazlina Yusoff[3], Haslinda Hassan[4], Ziti Akthar Supian[5]

[1] Kota Damansara Health Clinic, Petaling District Health Office, Selangor
[2] Seksyen 19 Shah Alam   Health Clinic, Petaling District Health Office, Selangor
[3] Seksyen 7 Shah Alam Health Clinic, Petaling District Health Office, Selangor
[4] Puchong Health Clinic, Petaling District Health Office, Selangor
[5] Seri Kembangan Health Clinic, Petaling District Health Office, Selangor

*Corresponding author: n.fadilah77@gmail.com

ABSTRACT

Introduction: Family planning practice is important among the high-risk mothers. Thus, the knowledge, attitude and practice of family planning among health care workers are very important in influencing the use of contraception among them. The objective of this study was to determine level of knowledge, attitudes and practices related to contraception among doctors and nurses in Petaling District, Selangor, Malaysia. **Methods:** A cross-sectional study involving 300 doctors and nurses working in the Maternal and Child Health Unit from six large public health clinics in Petaling district was conducted in May 2019. A self-administered questionnaire was used for data collection. **Results:** A total of 109 doctors and 149 nurses participated in this study. The response rate was 86%. The median duration of service in KKM and working in MCH were 9 years (IQR 6.0) and 3 years (IQR 6.0) respectively. Majority (74%) had attended CME on family planning. The mean score of knowledge was 9.0 (out of 13) (SD 1.899).   In terms of attitude, 51.6% would often suggest family planning to relatives or friends. Three common perceived barriers for effective counselling on family planning were too many patients (94.5%), time constraint (91.7%) and inadequate knowledge on contraception (60.4%). Common preferred methods of contraception among users were hormonal method (33.1%), followed by barrier (condom) method (29.5%). Medical officers had better knowledge score as compared to nurses (p<0.05). Perceived confidence in giving counselling was significantly associated with the duration they work in MCH (p<0.05). **Conclusion:** This study showed that the average knowledge on family planning was fair. Main perceived barriers to effective family planning counselling were time constraint, large patient crowd and inadequate knowledge. The perceived confidence in giving counselling will increase with the time they spent in MCH.

Keywords: Attitude, Contraception, Family planning, Knowledge, Malaysia, Practice

PP 02

The Malay Version of Ministry of Health's Adolescent Client Satisfaction Questionnaire: A Reliability Study

Hafizuddin Awang[1],*, Azriani Ab Rahman[1], Surianti Suker[1], Noran Hashim[2], Nik Rubiah Nik Abdul Rashid[3]

[1] Department of Community Medicine, School of Medical Sciences, Universiti Sains Malaysia, 16150, Kubang Kerian, Kelantan, Malaysia.
[2] Maternal and Child Health Unit, Kelantan State Health Department, 15590, Kota Bharu, Kelantan, Malaysia.
[3] Adolescent Health Sector, Family Health Development Division, Ministry of Health, Parcel E, Federal Government Administration Centre, 62590 Putrajaya, Malaysia.

*Corresponding author: drhafizuddin@moh.gov.my

ABSTRACT

Introduction: The need for client feedback in assessing healthcare services is widely recognized. However, little is known about the satisfaction of adolescent clients utilising healthcare services in Malaysia. To the best of our knowledge, there is no validated instrument to measure the satisfaction of adolescent clients attending health clinics in Malaysia. The objective of this study was to determine the reliability of the Malay Version of the Ministry of Health's Adolescent Client Satisfaction Questionnaire among adolescents attending health clinics in North-eastern Malaysia. **Methods:** A cross-sectional study was conducted in January 2019 among adolescents aged ten to nineteen years old that attended four designated health clinics in the Kelantan state of Malaysia. The test for Cronbach's alpha was performed to determine the internal consistency reliability. **Results:** There were a total of 85 adolescent clients involved in this study. The mean age of the respondents was 15.6 years old. Majority of respondents were female, Malay, students and attained secondary level of education. The internal consistency reliability was good as the Cronbach's alpha of the domain was 0.854. The corrected item-total correlation for the domain was acceptable as it was 0.4 and above. **Conclusion:** The Malay Version of the Ministry of Health's Adolescent Client Satisfaction Questionnaire showed excellent internal consistency reliability. Therefore, it may be recommended to be used as a tool to measure the satisfaction level among adolescents attending health clinics in Malaysia.

Keywords: Reliability, Malay version, Ministry of Health, Adolescent client satisfaction

PP 03

Prevalence of Undernutrition and Its Associated Factors among Under-five *Orang Asli* Children in a selected *Orang Asli* Settlement in Kuantan, Pahang

Karimah Hanim Abd. Aziz*, Hafizah Pasi, Jamalludin Ab. Rahman, Razman Mohd. Rus, Hashima R Nasreen, Farhan Rusli, Edre Mohammad Aidid, Faiza Tohit, Nor Artika Hassan, Mohammad Zubir Yusof

Department of Community Medicine, Kulliyyah of Medicine, International Islamic University of Malaysia, Kuantan Campus

*Corresponding author: karimahanim@iium.edu.my

ABSTRACT

Introduction: Undernutrition among under-five children is a very common issue in Malaysia, especially among the *Orang Asli* population. Therefore, identifying the prevalence and factors associated with undernutrition will assist in tackling the issue of undernutrition and reducing the morbidity and mortality rate associated with it. **Methods:** A total of 47 conveniently selected *Orang Asli* children aged 6 to 59 months from Kampung Paya Bungor, Gambang, Kuantan, Pahang participated in this cross-sectional study. A face-to-face interview was carried out by using the validated Questionnaire for the Study of Malnutrition in Rural Malaysia 2009. The weight and height of the children were measured and plotted on the growth chart. All the data were analyzed using IBM SPSS Statistics Version 24.0. Descriptive statistics was used to describe the background characteristics of the respondents and univariate analyses were used to identify suitable factors to be included in multivariate analysis. Binary logistic regression was done to determine independent factors associated with undernutrition. **Results:** The overall prevalence of undernutrition was 55.3%. The prevalence of underweight, stunting and wasting was 34.0%, 34.0% and 14.9% respectively. This research also revealed that gender (p=0.042) and family size (p=0.024) was shown to have a statistically significant association with undernutrition. However, there were no significant associations between undernutrition with other factors. **Conclusion:** The prevalence of undernutrition among under-five *Orang Asli* children was a concern. It was found that the factors associated with undernutrition were female children and children from small families. Prompt interventions aimed at the *Orang Asli* community should be done to overcome these problems.

Keywords: *Orang Asli*, Stunting, Undernutrition, Under-five, Malaysia

PP 04

Determinants of Pap Smear Screening among Urbanite Older Female in North Klang Valley

Nik Nairan Abdullah[1,2],*, Mohd Shahril Ahmad Saman[2]

[1] Department of Community Health, Faculty of Medicine, Universiti Kebangsaan Malaysia Medical Centre, UKM, Cheras
[2] Department of Public Health Medicine, Faculty of Medicine, Universiti Teknologi MARA(UiTM), Sungai Buloh, Gombak

*Corresponding author: niknairan@gmail.com

ABSTRACT

Introduction: As cervical cancer is the third most common cancer among women and ten percent of cervical cancer incidence among those 65 years and above, Pap smear is still relevant to be performed among older women. The aim of this study was to determine the determinants of Pap smear screening among older women in an urban setting. **Methods:** This cross-sectional study was conducted among 515 women aged 50 and above in two urban health centres in Gombak, Selangor. The sampling technique conducted was random systematic sampling. The independent variables were age, marital status, employment status, gynaecological history (family history of cervical cancer, menopause, hysterectomy), obstetric history (number of live births, ever had contraception), presence of chronic diseases (hypertension, Diabetes Mellitus, heart disease). **Results:** Only 202 (39.2%) out of 515 undergone Pap smear screening. An estimated 80.7% of them had their last Pap smear a year ago. The mean age of the respondents was 58.83± 7.05 years old and 77.3% had one and more comorbidities. The respondents preferred health care personnel as the source for the pap smear information compared to reading materials and internet. Married vs divorced (aOR=1.89,p=0.02); those with heart disease (aOR=0.32,p value=0.01; those with Diabetes Mellitus (aOR=0.57,p value=0.01; those who had hysterectomy (OR=2.89, p value=0.04) and those who had contraception (aOR=3.72, p value = <0.001) were significant determinants for undergoing Pap smear screening. **Conclusion:** The prevalence of Pap smear screening among older urban women is still low. Determinants identified can be used in enhancing the prevalence of performing Pap smear by organizing programmes via targeted groups.

Keywords: Comorbidities, Gynaecological history, Older women, Pap smear screening, Urban

PP 05

Association between Eating Behaviour and Weight Gain among Primary School Children in Bandar Baru Bangi, Selangor

Norliza Ahmad[1],*, Munn-Sann Lye[1], Zalilah Mohd Shariff[2], Firdaus Mukhtar[3], Lim Poh Ying[1]

[1] Department of Community Health, Faculty of Medicine & Health Sciences, Universiti Putra Malaysia, Selangor, Malaysia
[2] Department of Nutrition, Faculty of Medicine & Health Sciences, Universiti Putra Malaysia, Selangor, Malaysia
[3] Department of Psychiatry, Faculty of Medicine & Health Sciences, Universiti Putra Malaysia, Selangor, Malaysia

*Corresponding author: lizalil67@gmail.com

ABSTRACT

Introduction: Childhood obesity is increasing in prevalence in Malaysia. Excess in dietary intake and inadequate physical activity contribute to the development of obesity among children. The objective of this study was to determine the association between eating behaviour and excess weight among primary school children in an urban community in Malaysia. **Methods:** This is a baseline data of a randomized control field trial of a family-based intervention to reduce adiposity in overweight and obese children. It involved five primary government schools in Bandar Baru Bangi, Selangor. The inclusion criteria include parent-child dyad; children aged 7 to 10 years with body mass index (BMI) z-score of +1 standard deviation or more. Parents completed the validated self-administered Children Eating Behaviour Questionnaire (CEBQ). This questionnaire assessed children's eating behaviour that includes food responsiveness, enjoyment of food, emotional overeating, desire to drink, slowness in eating, satiety responsiveness, emotional undereating and food fussiness. The children's weight and height were measured and the BMI z-score was calculated. The association between CEBQ subscales and obesity was assessed using multiple linear regression, adjusted for sex and family income. **Results:** One hundred and thirty-four parent-child dyads had participated in this study. The food responsiveness was found to be significant with excess weight (β = 0.094, 95% CI: 0.02-0.17, p = 0.014). **Conclusion:** The food responsiveness subscale was associated with excess weight. This eating behaviour need to be taken into consideration in the development and implementation of health campaign targeted at the reduction of childhood obesity.

Keywords: CEBQ, Primary school children, Obesity, Eating behaviour, Food responsiveness

PP 06

Health Promotion Perspectives on Vaccine Hesitancy; Who, What and How?

Mohd Nazir Mohd Nazori[1,2,*], Rohani Ismail[1], Nur Syahmina Rasudin[1]

[1] School of Health Sciences, Universiti Sains Malaysia
[2] Kulliyyah of Allied Health Sciences, International Islamic University Malaysia

*Corresponding author: nazir.nazori@gmail.com

ABSTRACT

Introduction: Vaccine hesitancy is "to delay in acceptance or refusal of vaccination despite availability of vaccination services. Vaccine hesitancy is complex and context specific, varying across time, place and vaccines…". National vaccination data showed presence of hesitancy and the potential for others to develop hesitancy. An overview of vaccine hesitancy is needed to organise our understanding and to focus our efforts in health promotion. The objectives of this review were to (1) describe the scope of vaccine hesitancy involving target population, theoretical developments and practical implications and (2) to identify potential research avenues for health promotion in Malaysia. **Methods:** Scoping review methodology was used. Search strategy utilised keywords for publications from the year 2000 onwards with a focus on local parental vaccine hesitancy. Literature review focused on global theoretical development and analysis were done on local empirical findings. **Results:** Theoretical developments have led to the Vaccine Hesitancy Determinant Matrix (VHDM) describing factors within three themes: "vaccine/vaccination-specific issues", "individual or group influence" and "contextual influence". Parents can be classified into 'unquestioning acceptor', 'cautious acceptor', 'hesitant', 'late or selective vaccinator' and the 'refuser' of all vaccines. Globally, various mode of interventions has been explored. However, there was a disproportionate focus on knowledge, attitude and practice research among local parents. There were only two local interventional studies that have been published. **Conclusion:** There is a dearth of interventional studies locally. Each of the parental groups outlined needs a tailored approach to combat vaccine hesitancy. Global interventional research showed a multitude of approaches towards educational intervention that local researchers should capitalise on developing strategies, techniques and modules for the local population.

Keywords: Vaccine hesitancy, Health promotion, Malaysia, Parents, Vaccination

Sociodemographic Factors Associated with Quality of Life (QoL) among Pulmonary Tuberculosis Patients in a Specialist Respiratory Hospital in Kuala Lumpur

Nurul Asyiqin Aziz, Anisah Baharom*

Department of Community Health, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia, 43400 Serdang, Selangor, Malaysia

*Corresponding author: b_anisah@upm.edu.my

ABSTRACT

Introduction: Tuberculosis negatively impacts the patients' quality of life (QoL). Information on QoL among tuberculosis patients may highlight gaps in the current management of the disease by identifying target groups with lower QoL. This study aimed to identify the sociodemographic factors associated with QoL among patients followed up in an urban tertiary hospital. **Methods:** A cross sectional study was conducted among adults with drug-sensitive pulmonary tuberculosis, selected using simple random sampling method, in the Institute of Respiratory Medicine, Kuala Lumpur. The WHOQOL BREF was utilised to evaluate the physical, psychological, social relationships and environment domains of QoL. Descriptive analysis and univariate analyses to test association between independent sociodemographic factors and QoL domain mean scores were done. **Results:** A total of 237 patients participated with a response rate of 96.34%. The factor associated with the physical domain was sex ($t = 2.06$, $p = 0.04$), whilst age ($F = 3.77$, $p = 0.02$), sex ($t = 4.04$, $p < 0.001$), marital status ($F = 3.09$, $p = 0.04$) and education level ($F = 4.92$, $p = 0.008$) were associated with the social relationships domain. Age ($F = 3.55$, $p = 0.03$), sex ($t = 2.12$, $p = 0.03$), education level ($F = 7.97$, $p < 0.001$) and monthly household income ($F = 3.57$, $p = 0.03$) were factors associated with the environment domain. No sociodemographic factors were associated with the psychological domain in this study. **Conclusion:** Patients who were younger, female, married, had tertiary education or monthly household income of more than RM6000 were associated with higher QoL. Targeted interventions among the sociodemographic groups with lower QoL could complement current clinical management to improve tuberculosis patients' QoL.

Keywords: Quality of life, Tuberculosis, WHOQOL BREF, Malaysia

PP 08

HIV-Related Stigma among Healthcare Workers in Health Clinics in Hulu Langat, Selangor: A Preliminary Result

Natalia Che Ishak, Hayati Kadir Shahar*, Rosliza Abdul Manaf

Department of Community Health, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia, 43400 Serdang, Selangor, Malaysia

*Corresponding author: hayatik@upm.edu.my

ABSTRACT

Introduction: HIV-related stigma refers to prejudice, negative attitudes and abuse directed at people living with HIV (PLHIV) and interferes with both prevention and treatment efforts. This study was designed to examine drivers of HIV-related stigma among healthcare workers in health clinics in Hulu Langat, Selangor. **Methods:** This is a single-blinded, cluster randomised controlled trial (parallel groups). A total of 158 participants from the intervention group and 158 participants from the control group were randomised via balloting process at the cluster (clinic) level. A comprehensive self-administered questionnaire based on the stigma index tool was used. Data were analysed using IBM SPSS version 25 involving descriptive and bivariate analyses. The baseline results were analysed using the chi-square test and Mann-Whitney U test. **Results:** The response rate for the intervention group was 83.5% and 81.6% for the control group (82.3% combined response rate). Majority of the respondent's age between 30 – 39 years old, female, nurses, have experience working with PLHIV and worked for 0 – 9 years in the healthcare setting. Comparison of total infection concern score (p = 0.001) and total willingness to treat key populations (KPs) score (p = 0.025) between intervention and control group at baseline were significant. However, comparison of total opinion/perception about PLHIV score, total knowledge about HIV score, total intention to stigmatise score and total health facility policies and guidelines score between intervention and control group at baseline showed no significant difference. **Conclusion:** The significant difference between groups on certain scores above might be due to different job category between the two groups thus influence how willing they are in treating PLHIV. These findings may assist stigma reduction intervention programmes targeting healthcare providers in Hulu Langat, Selangor and ensure quality care for PLHIV.

Keywords: HIV stigmatising behaviour, Healthcare workers (HCW), People living with HIV (PLHIV), Key populations (KPs), HIV reduction-intervention

PP 09

Cost Analysis of an Early Intervention Programme for Children with Autism Spectrum Disorder and Its Contributing Factors in Klang Valley, 2019

Mohammad Najib Baharuddin, Muhamad Hanafiah Juni*

Department of Community Health, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia, 43400 Serdang, Selangor, Malaysia

*Corresponding author: hanafiah4660@gmail.com

ABSTRACT

Introduction: Autism spectrum disorder (ASD) is a public health concern globally, characterized by impairments in cognitive process, social functioning, communication skills, behaviours and interests. These problems require multidisciplinary approach through an early intervention programme (EIP) which is remarkably expensive. To date, the knowledge of EIP costs for ASD children in Malaysia remains unknown. The objective of this study was to determine the annual average EIP costs for ASD children from the societal perspective (total average costs, education costs, treatment costs, and living costs), and its contributing factors. **Methods:** A cross-sectional cost analysis study using simple random sampling according to proportion was conducted among 280 parents of ASD children receiving EIP services in Klang Valley. The data was collected using interview-based questionnaire and proforma. The Activity-based Costing Technique and Microsoft Excel 2016 were used to estimate the total annual average EIP costs, education costs, treatment costs, and living costs per ASD child. The association between the total annual average EIP costs and its contributing factors were carried out using Statistical Package for Social Sciences version 25. **Results:** The total annual average EIP costs, education costs, treatment costs, and living costs per ASD child were estimated at RM15,158; RM3,896; RM1,948; and RM4,409 respectively. There was a significant association (p<0.05) between the total annual average EIP costs and its contributing factors; family income, ASD level, programme characteristics, and family support. **Conclusion:** The study determined the total annual average EIP costs and its contributing factors. This information is beneficial as evidence to assist the decision on future resource allocation by the policy maker.

Keywords: Autism spectrum disorder, Average costs, Cost-analysis, Early intervention programme, Total costs

PP 10

Social Support in Physical Activity among Pregnant Women: Does it Really Help?

Nazatul Yusrina Mohamad Yusof, Nor Afiah Mohd Zulkefli*, Rosliza Abd Manaf

Department of Community Health, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia, 43400 Serdang, Selangor, Malaysia

*Corresponding author: norafiah@upm.edu.my

ABSTRACT

Introduction: Antenatal period is the best time to promote physical activity among women. However, this opportunity is usually missed due to various factors such perceived harm to the baby, tiredness, difficulty to perform the activities, pelvic and back pain, lack of information, as well as low social support. This study determined the association of social support with the level of physical activity among pregnant women in the district of Seremban, Negeri Sembilan. **Methods:** A total of 936 antenatal women met the eligibility criteria and were enrolled in a cross-sectional study using proportionate stratified random sampling. Data on social support from the spouse, family and friend were obtained using a 5-point Likert scale while physical activity was assessed using a short version of the International Physical Activity Questionnaire (IPAQ). Statistical analysis was conducted using chi-square test to evaluate the association between the study variables. **Results:** A total of 880 respondents completed the questionnaire. Out of that, 64.2% were physically inactive. Significant associations were found between social support from the spouse (p < 0.001), family (p = 0.001) and friends (p = 0.004) with the level of physical activity among the respondents. **Conclusion:** Social support plays a pivotal role in motivating antenatal women to perform physical activity. Thus, health intervention on physical activity among these women should involve the spouse, family members and friends to ensure the success of the program.

Keywords: Pregnant women, Cross-sectional, Social support, Physical activity

PP 11

Characteristics of Unsafe Deliveries in Malaysia : 2015 to 2017

Sarah Awang Dahlan*, Majdah Mohamed

Family Health Development Division, Level 7, Block E10, Complex E, Federal Government Administrative Centre, 62590, Putrajaya

*Corresponding author: sarah.ad@moh.gov.my

ABSTRACT

Introduction: In Malaysia, the proportion of safe deliveries remains above 98% since 2010. Safe delivery is defined as deliveries conducted by trained personnel; either doctors, nurses with midwifery training or community nurses. Despite the good coverage of trained personnel and continuous effort to promote birth preparedness among antenatal mothers, unsafe delivery still occur in Malaysia and reported as 0.5% in NHMS 2016. **Methods:** A retrospective analysis on the characteristics of unsafe deliveries from the national surveillance data for the period of 2015 to 2017 was carried out. Characteristics of mothers are extracted from the reports of unsafe delivery investigation by Ministry of Health Malaysia and descriptive analyses are carried out by year for trending. **Results:** Total of 985 unsafe deliveries were reported and investigated in 2015, 1201 in 2016 and 1045 in 2017. About 37.7% to 49.9% (n=453-521) of these deliveries were among Malaysians followed by 22.9% to 40% (n=239-394) among non-citizen without identification document and 11.1% to 27.6% (109-332 deliveries) among non-citizen with identification document. It is commonly reported among mothers aged 26 to 35 years old (38.6% to 43.4%; n=454-463) and multiparous (47.3% to 52.0%; n=494-512). About 25.5% to 35.4% (n=251-370) of these mothers never attended antenatal check-up. Five main reported reasons which had contributed to the unsafe deliveries in 2015 to 2017 were; invalid identification documents, financial constraints, transportation problems, far distance from health facilities and mother's personal choice. **Conclusion:** These findings translate into possible intervention targeted the above population on unsafe deliveries. Multi-sectoral strategies and inter-agency partnership are needed in strengthening the intervention.

Keywords: Characteristics, Maternal, National surveillance data, Trained personnel, Unsafe deliveries

PP 12

Effects of Happy Music on Repetitive and Restricted Behaviours in Children with Autism Spectrum Disorders: A Concept Paper

Nurul Izzah Wahidul Azam[1,*], Amir Muhriz Abdul Latiff [2], Chandra Kannan Thanapalan[1], Raja Mohamad Alif Raja Adnan[3]

[1] Department of Occupational Therapy, Faculty of Health Sciences, Universiti Teknologi MARA, Selangor, Malaysia
[2] Faculty of Medicine, Universiti Teknologi MARA, Selangor, Malaysia
[3] Faculty of Music, Universiti Teknologi MARA, Selangor, Malaysia

*Corresponding author: izzah.w.azam89@gmail.com

ABSTRACT

Introduction: Restricted and repetitive behaviours (RRBs) is one of autism spectrum disorders (ASD) core criteria. Exhibitions of RRBs produce profound implications on the functional aspect of these children and family. Evidence found that RRBs is related to the reward system dysfunction in the basal ganglia of these children. RRBs induces intrinsically rewarding effects on children with ASD. Listening to music was found to influence the reward system on the typical population and also discover to be promising as complementary strategies for ASD. A study found that high functioning adolescents with ASD cognitively stimulated through listening to happy music. Planning intervention for RRBs by looking towards the mechanism of reward system function remained unexplored. The primary objectives of this study is to examine the effect of happy music on RRBs symptoms. **Methods:** This study will use a randomised control trial research design with pre-test and post-test assessments in 20 children with ASD. Two parallel randomly assigned group will undergo twelve weeks of intervention sessions. The experimental group will listen to happy music and engage in free play sessions. For the control group, they will engage in free play session only without the music. Parents will complete the Repetitive Behaviour Scale-Revised, which consists of 6 subscales on RRBs to measure the outcome of the study. **Results:** The study will compare the RRBs between two groups. **Conclusion:** Outcome of this study may set forth further investigation on the management of RRB using non-aversive contemporary approach.

Keywords: Autism spectrum disorder, Restrictive behaviours, Repetitive behaviours, Music, Reward system

PP 13

Predictors of Preventive Practices towards Zika Virus Infection among Patients Attending Health Clinics in Seremban

Mohd Safrin Mohamad Bashaabidin, Sri Ganesh Mutiah*

Department of Community Health, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia, 43400 Serdang, Selangor, Malaysia

*Corresponding author: sriganesh@upm.edu.my

ABSTRACT

Introduction: Zika virus is mainly transmitted to human through bite of an infected Aedes species mosquito. It was reported that the transmission also occurs by blood transfusion, sexual intercourse and from mother to foetus. The World Health Organization (WHO) had declared Zika infection outbreak as Public Health Emergency of International-al Concern (PHEIC) in February 2016. Since December 2016, total of eight Zika cases had been reported to Ministry of Health, Malaysia (MOH). Since there is no available vaccine and specific treatment for the Zika virus infection, the preventive practices against Zika virus infection is the only defense and method to curb the infection. The objective of this study is to determine predictors of preventive practices towards Zika virus infection among patients attending health clinics in Seremban. **Methods:** A cross-sectional study was done in selected public health clinics in Seremban, involving 874 respondents recruited by simple random sampling method. Primary data was collected using self-administered questionnaires in English and Bahasa Malaysia. Descriptive and analytical statistics were performed using SPSS version 22.0. **Results:** Majority of the respondents were female (57.2%), below 40 years old (62.5%), Malay (83.1%), Muslim (83.8%), married (86.2%) and had secondary school education (51.8%), working (64.9%) with monthly household income of <RM3000 (57.6%). The five predictors for preventive practices towards Zika virus were Muslim (AOR=2.335, 95% CI=1.532, 3.559, p=<0.001), married (AOR=1.921, 95% CI=1.209, 3.052, p=0.006), working (AOR=1.468, 95% CI=1.023, 2.105, p=0.037), higher knowledge score (AOR=1.143, 95% CI=1.093, 1.195, p=<0.001), and higher attitudes score (AOR=1.086, 95% CI=1.054, 1.120, p=<0.001). **Conclusion:** Five variables have been identified as predictors for preventive practices towards Zika virus infection. We would recommend Seremban District Health Office to use the baseline information provided by this study in order to facilitate the health promotion strategy of Zika preventive education in Seremban.

Keywords: Aedes mosquito, Attitude, Knowledge, Preventive practices, Zika virus infection

PP 14

Obesity Intervention among Community in Taman Impian Ehsan, Hulu Langat, Selangor

Zailiza Suli*, Nur Zawani Jalaluddin, Hazariah Abdul Halim

PKD Hulu Langat, Lot 7523, Jalan Hentian 1C, Plaza hentian Kajang, Jalan Reko, 43000 Kajang, Selangor, Malaysia

*Corresponding author: drzailiza@moh.gov.my

ABSTRACT

Introduction: Obesity is a major public health concern worldwide. The increasing prevalence of obesity in all ages can cause chronic illnesses, such as Type 2 Diabetes Mellitus and Cardiovascular Diseases. The Body Mass Index (BMI) is generally used to classify an adult population as underweight (BMI <=18.5kgm-2), overweight (BMI >=25.0 kgm-2) or obese (BMI >=30.0 kgm-2). The normal BMI range lies between 18.5 and 24.99 kgm-2. Physical activity is an important component of lifestyle interventions for weight loss and the prevention of weight regain. The objective of this study was to assess the impact of physical activity in reducing the obesity among the selected participants in Taman Impian Ehsan, Hulu Langat. **Methods:** This study was a one-group pretest-posttest quasi-experimental design. The physical activity program took place three times a week for six months started from June to December 2018 which is a part of KOSPEN activity. **Results:** Thirty participants were recruited in the program. For pre- intervention study, 4 participants have normal body weight (BMI 18.5-24.99), 12 participants were overweight (BMI 26.0 to 30.0kgm-2) and 14 participants were obese (BMI > =30.0 kgm-2). Twenty six of participants were retained in the program while the rest quitted. Post-intervention study shows that seven participants have normal BMI, 10 participants were still overweight and nine participants still categorized as obese. Post-intervention study showed that 17 participants managed to lose weight with minimum of 1.2 kg and maximum of 22.6 kg. The average reduction of the body weight was 5%. **Conclusion:** Physical activity is one of most feasible approach that can assist communities in developing healthy behaviours that promote weight loss and maintain ideal body weight.

Keywords: Body mass index (BMI), Community, Obesity, Physical activity, Prevention

PP 15

Trend of Learning Disability among Lower Primary School Children in Malaysia from 2013 to 2018

Noorhaire Sumarlie Nordin*, Abdul Shukor Salha, Don Ismail Mohamed, Saidatul Norbaya Buang

School Health Sector, Family Health Development Division, Ministry of Health, Aras 7, Block E10, Complex E, Federal Government Administrative Centre, 62590, Putrajaya

*Corresponding author: drnoorhaire@moh.gov.my

ABSTRACT

Introduction: Learning disability (LD) is a neurologically related processing problem which can interfere with basic and higher learning skill. The prevalence of learning disability was estimated to be ranging from 5 and 9 percent in general population. The aim of this study was to describe the trend of LD among lower primary school children particularly among Year 3 school children from 2013 to 2018. **Methods:** Data were taken from the Ministry of Health database on LD among lower primary school children particularly among Year 3 school children in Malaysia from 2013 until 2018. These data were collected from the assessment of LD school children who were referred from schools nationwide to the government medical practitioners. **Results:** There were approximately 2.6 million Year 3 school children in Malaysia from 2013 until 2018. Of these, a total of 9,063 school children were diagnosed to have LD. There was an increase trend in the incidence of LD from 13 per 10,000 school children in 2013 to 77 per 10,000 school children in 2016. From 2017 onwards there was a reduction in the incidence which consistently remained at 35 per 10,000 school children. Of these, the highest incidence was seen in school children with Intellectual Disability (ranging from 18 to 36 per 10,000 school children) followed by those with Specific Learning Disability (ranging from 1 to 23 per 10,000 school children) from 2013 until 2018. **Conclusion:** Learning disability although not as common as other disabilities in general population is still an important issue that need to be tackled to improve the well-being of those affected.

Keywords: Intellectual disability, Learning disability, Lower primary school children, Malaysia

PP 16

Preliminary Result of Effectiveness of Education Intervention on Coping With Workplace Violence Among Healthcare Workers in Health Clinics

Mohd Safwan Bin Ibrahim, Ahmad Azuhairi Ariffin*, Sri Ganesh Muthiah

Department of Community Health, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia, 43400 Serdang, Selangor, Malaysia

*Corresponding author: zuhairifin@upm.edu.my

ABSTRACT

Introduction: Workers in health sector are exposed 5 times more workplace violence as compared to workers in other sectors. Their consequences can range from mild to severe, affecting the victim, quality of services and organization. The objective is to evaluate the effectiveness of educational intervention on workplace violence among healthcare workers in health clinics. **Methods:** This study is a single blinded cluster randomized trial to see the effectiveness of education intervention on coping with workplace violence involving 10 cluster clinics with total 82 respondents in each control and intervention group. Data was collected using pretested questionnaire at baseline, 1-month and 6-months post intervention. The analysis used were descriptive, compared mean at baseline, repeated measures of variance and Mixed Model. **Results:** Response rate 94% at 1-month due to loss to follow up. Majority of the respondents were female (82.3%), and Malays (83.5%). The prevalence of workplace violence was 27.4% and mostly involved psychological violence (95.6%). There were no significant different between control and intervention group characteristic at baseline. Repeated measures MANOVA test was conducted to test intervention effect on dependent variables. The results until 1-month time showed significant difference between intervention and control group on combination of the dependent variables over time in coping ($F_{(1,162)}=9.51$, $p=0.002$, and $\eta2=0.06$), knowledge ($F_{(1,162)}=10.47$, $p=0.001$, and $\eta2=0.061$) and confidence ($F_{(1,162)}=15.65$, $p<0.001$, and $\eta2=0.09$). Further analysis will be conducted after data being completely collected. **Conclusion:** Current result showed significant improvement in knowledge, confidence and coping level in intervention at 1-month follow up.

Keywords: Aggression, Educational intervention, Healthcare workers, Randomized control trial, Workplace violence

PP 17

Interactive Games to Improve Knowledge on Food Poisoning Prevention among School Children in Cheras

Mohd Safwan Ibrahim[1,2], Noriah Hajib[1,*], Mohd Fadhli Mohd Fauzi[1,3], Erma Nur Shadila Mahamad Najadi[1]

[1] Cheras Health Clinic, Cheras Health Office, Level 3, Jalan Yaacob Latif, Bandar Tun Razak, 56000, Kuala Lumpur, Federal Territory of Kuala Lumpur
[2] Department of Community Health, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia
[3] Department of Community Health, Faculty of Medicine, UKM Medical Centre

*Corresponding author: dr.noriah@moh.gov.my

ABSTRACT

Introduction: Food poisoning may occur as single sporadic cases or massive outbreak in any institution, including boarding schools. Early this year, Cheras District Health Office had implemented set of interactive games on food safety programme at two boarding schools in Cheras which had repeated incidences of food poisoning outbreak. This study aims to evaluate the effectiveness of interactive games on knowledge of food safety among school children in Cheras. **Methods:** This study is a retrospective study based on secondary data. Two boarding school with total of 135 students were. The students were divided into 4 groups and participates in all 4 modules of interactive games. There were 10 items pre and post questionnaire on food safety knowledge collected during the program with score ranged zero to ten. The data were analysed descriptively and analytically with paired t test. **Results:** The response rate of this study was 100 %. Majority of the respondents were Malays (68.1%) and male (66.7%). The mean score at pre and post were 6.78 and 7.72 respectively. Paired t test showed that there was a significant increase of 0.94 mean score of knowledge after the programme (p-value < 0.05, CI 95%= -1.212, -0.664). **Conclusion:** The knowledge scores on food safety of the students increased significantly after the interactive game. However, without control group, the improvement cannot be said solely due to the program itself.

Keywords: Food safety, Interactive game, Knowledge, Pre and post, School institution

PP 18

Prevalence and Associated Factors of Workplace Violence among Healthcare Workers in Emergency Departments of Public Hospitals in Melaka

Mohammad Nafis Sahiran, Halimatus Sakdiah Minhat*, Suhainizam Muhamad Salilludin

Department of Community Health, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia, 43400 Serdang, Selangor, Malaysia

*Corresponding author: halimatus@upm.edu.my

ABSTRACT

Introduction: Workplace violence (WPV) among healthcare workers (HCW) remains a significant public health issue in Malaysia. This study aimed to determine the prevalence and associated factors of WPV among HCW in Emergency Departments of public hospitals in Melaka. **Methods:** A cross-sectional study was conducted among 231 HCW who were selected in Emergency Departments (ED) from three public hospitals in Melaka through proportionate stratified random sampling method. Data was collected using self-administered questionnaire which consists of three parts (personal and workplace data, workplace violence, and psychosocial workplace environment factors). The period of workplace violence studied was any occurrence of it within six months prior to this study. The data were analysed using Statistical Package for Social Sciences (SPSS) software version 24. **Results:** The prevalence of WPV was found to be 38%, of which 88.9% were psychological violence, and were mostly perpetrated by combinations of type of perpetrators (51.9%). Multiple logistic regression shows that those aged 40 years and below have 5.4 times more likely to experience workplace violence compared to other age group, respondents with low job support has 2.9 times more likely to experience workplace violence compared to its counterpart, and respondents who work in secondary hospital have 2.7 times more likely to experience workplace violence compared to those who work in tertiary hospital. **Conclusion:** Preventive measures to prevent this issue should be in placed to tackle WPV especially among the at risk groups.

Keywords: Healthcare workers, Hospitals, Psychosocial workplace environment, Workplace violence, Malaysia

PP 19

The Status of Malaysian School Children's Visual Acuity from Year 1990 to 2017

Saidatul Norbaya Buang*, Abdul Shukor Salha, Marhaida Mahmood, Noor Haire Sumarlie Nordin

School Health Sector, Family Health Development Division, Ministry of Health, Aras 7, Block E10, Complex E, Federal Government Administrative Centre, 62590, Putrajaya

*Corresponding author: s.norbaya@moh.gov.my

ABSTRACT

Introduction: Refractive error is the most common cause of visual impairment among the school children. The visual acuity screening has long been administered through the school health service in Malaysia. The objective of this study was to examine the status of refractive error in the school health screening from year 1990 to 2017. **Methods:** Every year an average of 1.2 million students were screened for refractive errors through school health service. Students with visual acuity reading of 6/9 or worst based on 6-meter Snellen chart ware referred for confirmation of refractive error. Secondary data on school visual acuity screening from the Health Informatics for the period of 1990 to 2017 were used to describe the changing pattern of refractive errors. **Results:** It was observed that the prevalent of suspected refractive errors amongst the Standard 1 student increased from 7 per 1,000 students examined in 1990 to 44.4 per 1,000 students in the 2000 and further increased to 74 per 1,000 students before slow decline to 55 per 1,000 students from year 2015 to 2017. A higher level of detection was observed for students in standard 6 and form 3 between the period of 1990 to 2009 (78/1,000 and 65/1,000 respectively) and further decline thereafter to lowest level in 2017 (33/1,000 to 21.5/1,000 respectively). **Conclusion:** The Standard 1 students in the 21st century have higher rate of suspected refractive errors compared to their counterpart that lived in the 20th century. Community awareness program need to be introduce for early detection of visual acuity problem.

Keywords: Refractive errors, School screening, Visual acuity, Malaysia

PP 20

The Effect of Listening to Qur'anic Recitation on Social Skills among Children With Autism Spectrum Disorder (ASD)

Wan Fara Adila Wan Ahmad Kaspi[1,*], Kartini Ilias[1], Amir Muhriz Abdul Latiff[2], Mohd Zaid Daud[3]

[1] Faculty of Health Sciences, Universiti Teknologi MARA Puncak Alam, Selangor
[2] Faculty of Medicine, Universiti Teknologi MARA Sungai Buloh, Selangor
[3] Academy Islamic and Contemporary Studies, Universiti Teknologi MARA Shah Alam, Selangor

*Corresponding author: fara_iela03@yahoo.com

ABSTRACT

Introduction: The number of children diagnosed with Autism Spectrum Disorder (ASD) keeps increasing every year. ASD is a neurodevelopmental disability that affects social communication and social interaction. They also demonstrate restricted, repetitive pattern of behaviour, interest or activities (RRB) that shows at an early developmental age. Due to this characteristic, ASD children are facing difficulties in social skills aspect such as eye contact, expression, and making friends. Studying and reciting the Quran are often used in Malaysia to ameliorate the symptoms, but there is no specific study in Malaysia that demonstrates the impact of these renditions on ASD's children's social skills. The objective of this study was to investigate the effect selected Qur'anic verses recitation on the social skills of the children with Autism Spectrum Disorder (ASD). **Methods:** This study will use the quasi-experimental research design. This study will be held at IDEAS Autism Centre, Rawang. The purposive sampling technique will be used and 14 ASD Muslim children aged 4-6 years old will be chosen. The ASD children will be divided into an experimental and control group. The experimental group will be listening to selected Qur'anic verses before the intervention. The Social Responsiveness Scale- Second Edition (SRS-2) will be used to assess the response. The scale consists of a 65-item questionnaire, with a 4-point Likert-scale. **Results:** The expected result for this study is the ASD children in the experimental group will have lower Total-scores of SRS-2 compared to control group. **Conclusion:** Listening to Qur'anic recitation provides a cost-effective complementary therapy to improve social skills among Muslim ASD children. Information from this study also can be used as a stepping stone in developing the teaching module to ASD children.

Keywords: Autism Spectrum Disorder (ASD), Qur'anic Recitation, Social Skills, Social Interaction, Social Communication

PP 21

Family Gives Birth to School Bully: Truth or Assumption?

V.C. Anuratha Subramaniam[1,2], Anisah Baharom[1,]*, Nor Afiah Mohd. Zulkefli[1]

[1] Department of Community Health, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia, 43400, UPM Serdang, Selangor, Malaysia
[2] Ministry of Health Malaysia

*Corresponding author: anisbaharom@yahoo.com

ABSTRACT

Introduction: Family plays an important role in the development of an adolescent. Several theories postulate influences of bully behaviours within family context. Persistent act of school bullying may lead to violence and eventually disruption of a normal adolescence mental health. This study was done to address whether family factors were associated with school bully perpetrator. **Methods:** This was a cross sectional study conducted among Form One students from twenty-five schools in Selangor. Parental and respondents' consents were obtained prior to this research. Data was collected using a self-administered questionnaire comprising of sociodemographic data of the respondents, their family characteristics and parenting style. Cronbach alpha ranged from 0.70- 0.89. Data was analysed using SPSS v25. Ethical approval was obtained from the Ethics Committee for Research Involving Human Subject of Universiti Putra Malaysia (UPM). **Results:** Response rate was 92.7% with 1221 respondents. Majority of the respondents were females (62%), Malays (82.8%) and lived with married parents (91.2%). Prevalence of bully perpetrator was 12.8%. Parental marital status ($p < 0.05$), presence of substance abuse among family member ($p < 0.05$), presence of violence act among family member ($p < 0.05$), witnessing violence at home ($p < 0.05$), sibling violence ($p < 0.05$), presence of family hostility ($p < 0.05$) and permissive maternal parenting style ($p < 0.05$) were associated with school bully perpetrators. **Conclusion:** This study showed the association between family factors and the development of school bully perpetrators. It is a strong message for parents, educators, policy makers and health providers to collaborate and redesign prevention programmes in an effort to contracept the birth of a school bully.

Keywords: Adolescent, Bullying, Bully perpetrator, Mental health, School bully

PP 22

Associated Factors of Job Satisfaction among Healthcare Workers in Health Clinics under Petaling District Health Office Jurisdiction

Ahmad Faizul Abd Rahman Sazli, Ahmad Azuhairi Ariffin*

Department of Community Health, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia, 43400 Serdang, Selangor, Malaysia

*Corresponding author: zuhairifin@upm.edu.my

ABSTRACT

Introduction: Low job satisfaction among healthcare workers may lead to high turnover intention, poor job performance, high absenteeism, and low patient satisfaction. Global and local needs for health workforce are increasing in trend to meet current health demands. Addressing job satisfaction of the healthcare workers is a practical way to utilise the available human resources optimally. The main aim of this study is to determine job satisfaction level and its associated factors among healthcare workers in health clinics under the Petaling District Health Office jurisdiction in Selangor, Malaysia. **Methods:** A cross-sectional study was conducted among healthcare workers in ten health clinics in Petaling District from April until May 2019. Simple random sampling method proportionate to the number of staffs from each health clinics was done. A structured self-administered questionnaire was used. **Results:** The response rate was 93%. Majority of the respondent were female (83%), married (82%), diploma holder (41%), nurses (33%) and working in health clinics with specialists (93%). The job satisfaction mean score for the studied population was 4.46 (SD = 0.72). Self-rated physical health and mental stress status were significantly associated with job satisfaction (p < 0.001). **Conclusion:** The job satisfaction level of the studied population was comparable to other local studies and higher than studies from Iran, Ethiopia and China. Extra attention should be given to healthcare workers with poor physical health and poor mental stress. More objective study on physical health and mental stress is required.

Keywords: Healthcare worker, Job satisfaction, Health clinic, Mental stress status, Malaysia

PP 23

Job Stress and Its Associated Factors among Nurses in Primary Healthcare Facilities in Kuala Langat District, Selangor, Malaysia in 2019

Nur Emmy Fizreena Shamsuddin, Huda Zainuddin*, Salmiah Md. Said

Department of Community Health, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia, 43400 Serdang, Selangor, Malaysia

*Corresponding author: hidazai@upm.edu.my

ABSTRACT

Introduction: Job stress is defined as harmful physical, negative, emotional responses that occur when the requirements of the job do not match the capabilities, resources or needs of the worker. Factors influencing job stress among nurses in primary healthcare in Malaysia are poorly identified. The objective of this study is to assess the job stress score and identify the predictors of job stress among nurses in Primary Health Care (PHC) facilities in Kuala Langat district of Selangor. **Methods:** A cross-sectional study conducted among 216 nurses in PHC facilities of Kuala Langat District. Data collection conducted using self-administered questionnaire adopted and modified from Job Stress Scale, Nursing Stress Scale (NSS) and Expanded Nursing Stress Scale (ENSS). **Results:** There is evidence of job stress with mean score of 28.4(5.5) among nurses in PHC facilities of Kuala Langat District, Selangor, Malaysia. There are association between age, role in organization, duration of services, outside job scope, family size, doing house chores, balance between work and family, balance between work and leisure activities, workload, inadequate preparation, lack of staff support, uncertainty concerning treatment, role conflicts and patients and their families with job stress (p <0.05). Doing house chores at home (β_1 = 1.605, 95% CI: 0.359, 2.852, p<0.05), balance between work and family (β_1 = 3.902, 95% CI: 2.255, 5.549, p<0.001), workload (β_1 = 0.437, 95% CI: 0.315, 0.559, p<0.001) and role conflicts (β_1 = 0.188, 95% CI: 0.006, 0.369, p< 0.05) are the predictors of job stress among nurses win PHC of Kuala Langat District. **Conclusion:** Nurses who unable to balance their work with family members, doing house chores by themselves, increase of workload and role conflicts at the workplace give a higher score for job stress among nurses in PHC of Kuala Langat District. It is recommended that time management talk for nurses specifically for managing quality time with family members need to be done. Nurses must be able to balance time between work and family or personal life.

Keywords: Job stress, Job Stress Scale, Nurses, Primary healthcare, Malaysia

PP 24

Trends of Prevalence of Anaemia among Adolescents in a Middle-Income Country: A Cohort Study

Vanitha Krishnan[1], Hazreen Abdul Majid[1,2], Rafdzah Ahmad Zaki[1], Muhammad Yazid Jalaludin[3]

[1] Department of Social and Preventive Medicine, Faculty of Medicine, University of Malaya, Kuala Lumpur
[2] Centre for Population Health, Faculty of Medicine, University of Malaya, Kuala Lumpur
[3] Department of Pediatrics, Faculty of Medicine, University of Malaya, Kuala Lumpur

*Corresponding author: vaneetha20@hotmail.com

ABSTRACT

Introduction: Anaemia is a significant public health problem among adolescents globally but there is limited data in many countries, including Malaysia. This study aims to investigate the 5-years incidence of anemia among Malaysian adolescents by gender, ethnicity, locality of schools, Body Mass Index, stature and diet intake. **Methods:** A secondary analysis of existing data from MyHeART study was conducted within a closed cohort of 528 adolescents (aged 13 years) attended 15 public secondary schools from Kuala Lumpur, Selangor and Perak. The adolescents who were followed up at 15 and 17 years old had completed haemoglobin assessment, anthropometric measurements and -days diet history. The data was cleaned and missingness was handled accordingly with multiple imputation. SPSS Software version 21 was used to analyse the data, with Generalised Estimating Equation (GEE) showing the effect of time on the trajectory of prevalence of anaemia over the 5 years. **Results:** The prevalence or incidence? of anaemia in 2012, 2014 and 2016 was 7.9% (95%CI: 5.0-12.3), 13.9% (95%CI: 10.0-19.0) and 15.8% (95%CI:11.3-21.7). In females, anaemia increased from 11.1% (95%CI:6.7-18.7) to 15.7% (11.4-21.3) and 23.1%(95%CI: 16.8-31.0); the change was significant from 13 to 15 years old. Similar trend was noticed in those who are stunted, overweight/obese, in both urban/rural schools and didn't meet their daily recommended nutrient intake for total calorie, protein and iron. **Conclusion:** Anaemia is increasing in trend among the adolescents over the years and deems attention from the relevant stakeholders to create a robust anemia prevention program.

Keywords: Anaemia, Adolescents, Prevalence, Trends, Schools

PP 25

A Review on Hindering Factors to Maximize Healthcare Potential in Poverty and Islamic Way of Promoting Health

Farrah Farzana Abdullah, Mohd Rahman Omar*

Faculty of Medicine and Health Sciences, Universiti Sains Islam Malaysia, 71800 Bandar Baru Nilai, Negeri Sembilan

*Corresponding author: rahmanomar@usim.edu.my

ABSTRACT

Introduction: Malaysia has been nominated among the top four well-established healthcare system in the world. However, with the status of a developing country, there are still lacking in offering healthcare services and awareness among poverty. The objective of this review is to look into the factors hindering healthcare coverage in poverty. **Methods:** These literature reviews were carried out by using the electronic databases included, Google Scholars, Medline, PUBMED and EBSCOhost. **Results:** In current economic status, poverty status needs to be revised as the cost of living has markedly increased especially in the urban. Many factors affect the health status, which include the issues in term of rising health expenditure, demography-geography and imbalance workload distribution. Less exposure to health and wellness and geographical-demographic profile are the main reasons for the lack of self-awareness in assessing health services. Various actions had been taken by the stakeholders to improve health statuses such as telehealth, referral system and integration between agencies. Suggestion to improve the existing plan with the attention given especially in the rural area which composed of multi-ethnicity and demography-geographical distribution. In Islam, Prophet Muhammad PBUH promotes health through his eating habits, physical activities include prayer and sports, proper sleep habit and through fasting. **Conclusion:** Poor and lack of awareness of healthcare services and health ownership have been the main reason for low health-seeking in poverty. Factors such as rising health expenditure, demography-geography factors and lack of facilities provided and unbalance workload distribution in the public-private sector contribute to the issue of concern.

Keywords: Hindering factors, Healthcare, Islamic perspective, Poverty, The Prophet

PP 26

Costs of Fogging Activities and its Contributing Factors at Hulu Langat District Health Office, Selangor, Malaysia

Muhammad Syazni[1], Aidalina Mahmud[2,*], Suhainizam Muhamad Saliluddin[2]

Department of Community Health, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia, 43400 Serdang, Selangor, Malaysia

*Corresponding author: aidalina@upm.edu.my

ABSTRACT

Introduction: Dengue fever currently remains as one of the major public health issues in Malaysia. Dengue incidence in Malaysia has been increasing in the last 20 years. Dengue fever has been causing an economic burden to the country each year. Vector control is one of the preventions and control activities to reduce its incidence. Vector control activities, especially fogging is a resource-intensive activity. It uses most of the allocated budget of a district health office (33%). The major cost components of the prevention and control activities were human resources and pesticides with 60.7% were for human resources and 13.6% of the costs were for pesticides. Therefore, it is important to know, cost of each fogging activity and the factors that contribute to that cost. The objective of this study was to determine the costs of fogging activities carried out by Hulu Langat Health District Office, Selangor, Malaysia. **Methods:** This study was a retrospective descriptive and analytical study using data from the Hulu Langat District Health Office for the year 2018. Cost analysis of fogging activities was carried out using the activity-based costing methodology. The factors associated with, and predictors of, the costs of fogging activities were determined using chi-square and multiple linear regression. **Results:** In 2018, Hulu Langat District Health Office carried out total of 2,063 fogging activities. The average cost of each fogging activity was estimated as RM 1,579. Types of insecticides was statistically significant associated and predictive factor of the cost of fogging activity. **Conclusion:** The present study showed that the estimated average cost per fogging activity is RM 1,579 and water-based insecticide was found to be the cheaper option compared to oil-based insecticide. However, as this study did not determine the effectiveness of these insecticides, recommendations cannot be made as to which insecticide should be used.

Keywords: Activity-based costing, Cost of fogging, Pesticides, Vector control activities, Malaysia

PP 27

Knowledge and Attitude about Child Abuse and Its Reporting among Childcare Providers in Kemas Preschools in Kota Bharu and Tumpat

Siti Mariam Ja'afar*, Azriani Ab Rahman, Wan Nor Ariffin Wan Mansor

Department of Community Medicine, School of Medical Sciences, Universiti Sains Malaysia, 16150 Kubang Kerian, Kelantan, Malaysia.

*Corresponding author: ctmariamjaafar@gmail.com

ABSTRACT

Introduction: Child abuse is an epidemic and in Malaysia, the numbers are rising. Statistic showed that 60% of the victims were below seven years old. Since most of them goes to preschool at this age, the role of childcare providers (CPs) in addressing this issue is crucial. However, previous data showed that referrals made by them to the authorities was less than 1%. The objective of this study was to determine the knowledge and attitude of CPs in KEMAS preschools towards child abuse. **Methods:** This is a cross-sectional study involving CPs working in the KEMAS preschools in Kota Bharu and Tumpat, Kelantan, Malaysia, from April to June 2019. **Results:** From 218 respondents, 78% and 83% of them had good awareness on signs of neglect and physical abuse respectively compared to sexual abuse (64.6%). In terms of knowledge, 80% answered correctly about signs of abuse. However, only 18.8% answered correctly about sexual abuse. Moreover, 86.7% of CPs believed that they should be responsible to lodge a report, while only 6% of them objected. Although 76.1% were correct about the information to be prepared for reporting, only 4.6% of them realised that suspicions about a case would suffice to lodge a report. There were 94.5%, and 65.1% of CPs who correctly answered about the protection of the reporter under the law and its penalty respectively. But, only 26.6% of the CPs were correct about the category of mandated reporters according to the law. **Conclusion:** Although majority of CPs had good knowledge and awareness, there was still 26.6% who did not realise that they were mandated to report suspected cases. Therefore, educational programs need to be planned to increase awareness and knowledge on abuse and its legal aspects among CPs.

Keywords: Attitude, Child abuse, Knowledge, Reporting, Kelantan

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PP 28

Prevalence and Its Associated Factors of Low Back Pain Among Foggers in a District Health Office in Malaysia

Muhamad Farhan Ab Razak, Titi Rahmawati Hamedon*, Haidar Rizal Toha

Department of Community Health, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia, 43400 Serdang, Selangor, Malaysia.

*Corresponding author: rahmawati@upm.edu.my

ABSTRACT

Introduction: Low back pain (LBP) is a common symptom among working population worldwide. Foggers prone to have LBP because there are exposed to physical factors such as lifting heavy object, awkward body posture and vibration. However, LBP had never been studied among the fogger. The objective of this study was to determine the prevalence and the factors associated with LBP. **Methods:** A cross-sectional study was carried out in all District Health Office in Johor, Malaysia by using a validated self-administered questionnaire and anthropometric measurements. Chi-square or Fisher's exact test was used for inferential statistic and multiple logistic regression was used to determine the associated factors. The significance level was determined at p < 0.05. **Results:** The response rate was 83.9%. Majority of them are male (99.6%), Malay (95.8%), married (85.8%) and educated up to secondary school (53.5%). Majority of respondents do not have part time job (89.6%) but they work overtime everyday (62.7%). Most of them do four hours overtime daily (77.3%). The prevalence of LBP was 68.5% among respondents. There was a significant association between doing part time job, duration of doing overtime per week, body mass index (BMI) and duration of fogging activities. Finally, the associated factors of LBP were doing overtime for more than 20 hours per week (adjusted OR=1.914, 95% CI [1.102, 3.324], p = 0.021), BMI of more than 23.00 kg/m2 (adjusted OR=2.066, 95% CI [1.090, 3.916], p = 0.026) and having no part time job (adjusted OR=0.135, 95% CI [0.031, 0.599], p = 0.021). **Conclusion:** Prevention needs to be initiated to change the modifiable factors of LBP in order to reduce the prevalence of LBP among them.

Keywords: Body mass index, Foggers, Low back pain, Malaysia

PP 29

Reproductive Risk Factors of Ovarian Cancer among Women at Selected Hospitals in Klang Valley

Osmond John Ugwu[1], Salmiah Md Said[1],*, Nor Afiah Mohd Zulkefli[1], Zulida Rejali[2], Zainab Yahaya[3], Noraihan Nordin[4]

[1] Department of Community Health, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia, 43400, Serdang, Selangor, Malaysia.
[2] Department of Obstetrics and Gynaecology, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia, 43400, Serdang, Selangor, Malaysia.
[3] Department of Obstetrics and Gynaecology, Serdang Hospital, 43400, Serdang, Selangor, Malaysia.
[4] Department of Obstetrics and Gynaecology, Kuala Lumpur Hospital, 50586, Kuala Lumpur, Selangor, Malaysia.

*Corresponding author: salmiahms@upm.edu.my

ABSTRACT

Introduction: Ovarian cancer is the fourth most common cancer among Malaysian women. Despite being a malignancy with low incidence, ovarian cancer has a high mortality rate with just about 35.2% of 5-year survival. There is a limited published study on the risk factors for this cancer in Malaysia. This study aimed at identifying the reproductive risk factors of ovarian cancer among women at selected hospitals in Klang Valley. **Methods:** A hospital-based case-control study was conducted from April 2017 to November 2019. Subjects were Malaysian citizens and aged 18 years and above. The case referred to a known case ovarian based on histopathological examination (HPE) and had been diagnosed not more than 2 years during the recruitment into the study. Controls were selected based on a negative result of HPE or intra-operative visual inspection and examination or normal findings from the ultrasound. Data was collected using a self-administered questionnaire. **Results:** A total of 111 cases and 134 controls who fulfilled the inclusion criteria participated in this study. Binary multiple logistic regression analysis showed that age at first pregnancy and infertility experience were significantly associated with risk of ovarian cancer. The odds of first pregnancy after the age of 25 years among cases was higher compared to the odds among controls (AOR=2.997, 95%CI: 1.295, 6.932, p=0.010). On the other hand, the odds of infertility experience among cases was lower compared to the controls (AOR=0.289, 95%CI: 0.099, 0.846, p=0.024). The lower odds of infertility experience among cases shown in this study must be interpreted with care because of wide interval and as infertility was reported to be a risk factor of ovarian cancer elsewhere. **Conclusion:** Reproductive risk factor for ovarian cancer were aged at first pregnancy of 25 years and above. Prevention of ovarian cancer should be targeted to his group.

Keywords: Ovarian cancer, Reproductive history, First pregnancy, Parity, Breastfeeding