

Conclusion Although attempted suicide patients should be referred for psychiatric assessment, many of them were not. It is important to strengthen the chain of care as well as to educate health providers and family members to prevent repeated suicide attempts.

SP3-31 DETERMINANT FACTORS CONTRIBUTION TO THE DEATH OF INDONESIAN HAJJ PILGRIMS FOR THE AGES OF >40 YEARS IN MECCA, SAUDI ARABIA

doi:10.1136/jech.2011.142976o.31

N Kodim.* *University of Indonesia, Jakarta, Indonesia*

Introduction The mortality rate Indonesian Hajj Pilgrims is higher than Indonesian population mortality. The mortality rate of Indonesian hajj pilgrims fluctuated ranging from 2 to 3.8 per 1000 hajj. **Methods and Materials** This research conducted to the 149537 ordinary hajj pilgrims. Design of the study was cross-sectional ecological studies. Analysis was done using multilevel logistic regression.

Results Factors that contribute to mortality of Indonesian hajj pilgrims are age, sex, educational level, length of stay and pre-existing diseases. The factors with the highest contributions to mortality were age 60–69 years (36.4%), age >79 years (30.0%), male (27.6%) and low education (29.0%). Pre-existing disease contributed <6% to the death rate. Adjusted real per capita expenditure, no access to health facilities adult literacy, populations with health problems and populations self medicating contributed to mortality of Indonesian hajj pilgrims after controlling for other variables.

Conclusions It appears safer for Moslems to go to Mecca before age 50 years. We would suggest paying increased attention to the Hajj pilgrims >50 years old, males, those that are thin, those who have lung diseases, metabolic problems or cardio-cerebrovascular and those who flight in the second turn. Further research is needed about the cause of death of Hajj pilgrims in order to assess the effects of environment conditions in Saudi Arabia on Indonesian Hajj pilgrims.

SP3-32 NUTRITIONAL CORRELATES OF EXCESS WEIGHT AMONG ADOLESCENTS

doi:10.1136/jech.2011.142976o.32

^{1,2}Z Affi,* ³H Hassan, ²O El-Mahgoub, ^{3,4}A El-Sayed. ¹*College of Medicine, King Faisal University, Al Ahsa, Eastern province, Saudi Arabia;* ²*Faculty of Medicine, Cairo University, Cairo, Egypt;* ³*National Nutrition Institute, MOH, Cairo, Egypt;* ⁴*MOH, Al Kasim, Saudi Arabia*

Introduction This study was carried to study the nutritional correlates of excess weight among adolescent scholars.

Methods Two-phase study, a case finding survey followed by case control study. The survey was carried out in 4 schools in Cairo. It included 1551 students. Weight and height were measured. We classified them according to the WHO BMI cut-offs into excess weight (EWG) and normal weight (NWG) groups. Two stratified random samples, 151 each were selected from the two groups. We enquired about the nutritional knowledge, attitudes, self efficacy and dietary practices (24-h recall and Semi-quantitative-food frequency) in the two groups. The schools' nutrition service was assessed.

Results Overall prevalence of excess weight was 30.2% (obesity 11.6% and overweight 18.6%). The rate was slightly higher in females than in males (33.3% vs 27.2% respectively). EWG had lower mean scores of nutritional knowledge and sound dietary beliefs. Lower percentage of EWG knew about the causes of obesity, were satisfied with their current weight or had self efficacy ($p=0.000$). One third tried to decrease weight previously and

recently. Higher percentage EWG consumed >100% RDA of protein and total energy; >300 mg cholesterol ($p=0.000$). They consumed all food groups more frequently except fruits. Higher percentage had lots of snacks between meals and when bothered ($p=0.000$ and 0.02). School nutrition service was deficient and favoured the provision of high energy foods.

Conclusion There is a need to improve the knowledge, attitudes and dietary practices in this age group and to improve the nutrition service at school.

SP3-33 MANAGEMENT AND PREVENTION OF DIABETES USING COMMUNITY- AND ICT-BASED PROGRAM IN JAPANESE RURAL COMMUNITIES

doi:10.1136/jech.2011.142976o.33

¹K Shiwaku,* ^{1,2}T Hamano, ¹M Iwamoto, ¹M Yamasaki, ¹M Takeda. ¹*Shimane University School of Medicine, Izumo, Japan;* ²*Shimane University, Matsue, Japan*

In recent years, there has been rapid growth in non-communicable disease in developing and developed countries. Diabetes has been identified as a healthcare priority by the Japanese government and WHO. The growth in type 2 diabetes (diabetes) is due to increases in the number of people with diabetes associated with increased longevity and lifestyle changes. Approximately 13.5% of the Japanese population now has either diabetes or impaired glucose tolerance. This high prevalence of diabetes is associated with a significant economic burden, with diabetes accounting for up to 6% of the total healthcare budget. Living a healthy lifestyle and weight control will go a long way in preventing the risk of diabetes and other related complications. The Shimane Study, which was undertaken in collaboration with rural communities, revealed prevalence of diabetes increased with urbanisation. Residents in the rural communities had few intakes of lipid and protein, and higher exercise by farming, compared to those in local city. We recruited 188 volunteers with prediabetes for the multi-component 3-month health promotion program, covering nutrition, physical activity and supportive group therapy health promotion program from participants of cohort study. All the participants completed the program from December 2009 by supported the Ministry of Economy, Trade and Industry. Improvement of glucose tolerance was remarkable to change their lifestyle in the higher group with HbA1c. We are developing a new community- and ICT-based program from 2010 by supported the Ministry of Internal Affairs and Communications.

SP3-34 THE OVERVIEW AND PROSPECTS OF "JAPAN ECO & CHILD STUDY" IN FUKUSHIMA

doi:10.1136/jech.2011.142976o.34

S Yasumura,* K Hashimoto, M Hoshoya, K Fujimori, Y Wakagi. *Fukushima Medical University, School of Medicine, Fukushima, Japan*

Introduction The Japanese Ministry of the Environment has begun a birth cohort study, Japan Eco & Child Study, to clarify the influence environmental risks on children (<http://www.env.go.jp/chemi/ceh/index.html>). This study will be conducted on 100 000 pregnant mothers and their children from across Japan from 2011. Twenty-six areas across Japan offered to participate in this project, and 15 sites, including Fukushima Medical University, were chosen. The purpose of this birth cohort study is to elucidate an important hypothesis: that environmental factors, including the exposure of children from the fetal period to early childhood to chemical compounds, affects pregnancy/reproduction, the incidence of congenital anomalies, mental development, immunology/allergy, and metabolism/endocrine systems. If environmental agents affecting the growth/

development of children can be clarified and reported to a risk management bureau, appropriate risk management steps, such as self-imposed restraints, examination chemical compound control, and the implementation of environmental quality standards in water and soil, can be applied.

Methods Investigation scale: 100 000 pregnant mothers and their children from across Japan (we plan to enrol 6840 pregnant mothers from Fukushima City, South Soma City, and Futaba County). Investigation period: 16 years (3 for recruitment, 13 for tracking) commencing 31 January 2011.

Results and Conclusion Recruitment number and rate in a half year will be presented. The prospects of Japan Eco & Child Study in Fukushima will be also described in presentation. It is important to discuss the problems on long term study.

SP3-35 INVESTIGATING DENTAL TREATMENT AS A POSSIBLE RISK FACTOR FOR VARIANT CREUTZFELDT-JAKOB DISEASE (VCDJ) IN THE UK

doi:10.1136/jech.2011.142976o.35

¹A Smith, ²D Everington, ²P Watt, ²F Ord, ²A Molesworth, ^{*} ²R Will, ²H Ward. ¹College of Medical, Veterinary and Life Sciences, University of Glasgow, Glasgow, UK; ²National CJD Surveillance Unit, University of Edinburgh, Edinburgh, UK

Introduction The potential for vCJD transmission in the healthcare setting has raised concerns over the risk posed by dental surgery. The aim of this study was to determine whether dental treatment was a possible risk factor for vCJD, by looking for links between vCJD cases and whether there was an excess of dental treatment in vCJD cases compared with general population controls.

Methods Dental treatment records were collected from general dental practitioners or, where this was not possible, from NHS Dental Practice Board payment schedules.

Results Data were available for 49% (79/162) of cases and 82% (503/610) of controls. Two pairs of cases had received dental treatment at the same dental practice, however the type and timing of recorded interventions did not provide strong evidence that this was how vCJD was acquired. The review of specific dental treatments also showed that there was no evidence that vCJD cases experienced an excess of any type of dental treatment compared with controls.

Conclusions This study provided no compelling evidence of a strong association between dental treatment and vCJD, however because of the limited availability of dental information, and the possibility of undetected asymptomatic infection, we cannot exclude dental treatment as a possible risk factor for vCJD. We recommend the development of more portable and robust mechanisms for dental record keeping in the UK that are also useable for public health purposes, and support current health policy to ensure that high standards of cleaning and sterilisation of re-usable dental instruments are maintained.

SP3-36 UTILISATION OF MATERNAL HEALTH SERVICES AMONG WOMEN OF REPRODUCTIVE AGE GROUP IN A RURAL DISTRICT, SOUTHERN NIGERIA

doi:10.1136/jech.2011.142976o.36

¹M Agogbuo, ^{*} ²S Akpovi, ³N Achime, ⁴S Bello. ¹University of Calabar Teaching Hospital, Calabar, Cross River, Nigeria; ²University of Benin, Benin City, Edo State, Nigeria; ³University of Benin, Benin City, Edo State, Nigeria; ⁴University of Calabar Teaching Hospital, Calabar, Cross River, Nigeria

Introduction The Maternal mortality ratio is unacceptably high in Nigeria. A major remote cause of maternal death in Nigeria is poor

utilisation of health services by women of reproductive age group. This study sought to determine the level of utilisation and factors associated with the use of maternal health services among women of reproductive age group in Egor LGA of Edo State.

Methodology A cross-sectional descriptive survey was carried out among 349 respondents in four communities. A multistage sampling technique was used to select respondents from whom data were collected using a pre-tested, interviewer-administered, semi-structured questionnaire and an observational checklist. Factors were identified with bivariate and multivariate analysis.

Results The greatest preference was for Traditional Birth Attendants (52.2%), followed by health centre (43.5%). Reasons for preference of choices included cheap cost (52.6%) and safety (37.8%). Reasons for dissatisfaction with services at the health centre were: lack of doctors (54.0%), poor attitude of health workers (27.2%) and lack of drugs (13.6%). At bivariate analysis, factors that were significantly associated with utilisation were: respondents' education ($p < 0.0001$), occupation ($p < 0.0001$), distance of respondents' home from health facility ($p < 0.0001$) and perception of adequacy of sitting of health facility ($p < 0.0001$). Farmers (Adjusted OR, AOR 0.28, 95% CI 0.13 to 0.61) and the unemployed (AOR 0.28, 95% CI 0.10 to 0.78) were less likely to patronise health centres than civil servants.

Conclusion Jobs should be created to increase earning capacity of residents of Edo State in order to improve utilisation of maternal health services.

SP3-37 TOBACCO SMOKING IN BRAZIL: REGIONAL INEQUALITIES AND PREVALENCE ACCORDING TO OCCUPATIONAL CHARACTERISTICS

doi:10.1136/jech.2011.142976o.37

A M Cascaes, ^{*} F C Wehrmeister, J Martínez-Mesa, A M B Menezes, A J D Barros. Federal University of Pelotas, Pelotas, Rio Grande do Sul, Brazil

Introduction Tobacco smoking is a great public health problem. Its evaluation and monitoring is important to identify risk groups and help guiding public policies.

Objectives To describe the prevalence of daily tobacco smoking according to sex, age, per capita household income and occupation of residents over 15-year old in Brazil and macro-regions.

Methods We analysed data of 252,768 individuals from the 2008 Brazilian National Survey, the *Pesquisa Nacional por Amostragem de Domicílios* (PNAD/IBGE). The analysis was adjusted for the sampling design. Multivariate Poisson regression models were used to associate occupational variables to smoking.

Results Daily smoking prevalence in Brazil was 15.1%, varying from 12.0% in North region to 17.4% in Southern region, and was 62.0% higher in men compared to women. Higher proportion of male smokers was between 50 and 59 years old and in women the peak was from 40 to 49 years old. Smoking was inversely proportional to household income, varying from 11.5% among the 20% richest to 18.6% among the 20.0% poorest. Same trends for gender, age and income were observed in the different regions of Brazil. Daily cigarette consumption was 32.0% higher among workers compared to non-workers. White collar workers presented a smoking prevalence below 10.0%, while blue collar workers had rates above 20.0%. The association between smoking and occupation remained after the adjustment for sex, age and household income ($p < 0.001$).

Conclusions the inequalities found should be considered when developing effective strategies to smoking control and cessation. The occupational groups more exposed should have priority in the interventions.