

SP4-7 HEALTH STUDENTS' KNOWLEDGE AND NEEDS RELATING TO GLOBAL HEALTH AND HEALTH EQUITY: A PROVINCE-WIDE STUDY

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The purpose of this study is to evaluate the extent of global health content in the current curricula of family medicine, nursing and physiotherapy programs and to conduct a survey for students in order to evaluate the knowledge, attitudes and education needs about global health.

Methodology The global health content of medical, nursing and physiotherapy curricula will be assessed through a document analysis. The appraisal will include the printed and electronic documents of these programs from each of the six Ontario universities in Canada. Additionally, a survey will be validated and administered to health students. The validation will cover face and content validity, reliability and internal consistence reliability. The sample size will be calculated with the Bland formula. Cronbach's α will assess the internal consistency of the instrument for a complete multi-question scale.

Results The preliminary results of the document analysis revealed a lack of global health content in the curricula of these programs. There was a lack of printed and electronic information about global health as well as a lack of information regarding the description of the global health programs, evaluation, mentorship, funding, objectives and challenges. We are currently in the process of collecting data for the quantitative study.

Conclusion The preliminary conclusion of this study showed that there is a lack of global health content in the nursing, family physician residency and physiotherapy programs. Additionally, there is a need to develop global health competence across disciplines in order to improve health outcomes for diverse and disadvantaged population and promote health equity.

SP4-8 HEALTH HAZARD DUE TO EXPOSURE OF PESTICIDE IN DABALIAPARA AREA OF BARPETA DISTRICT, ASSAM, INDIA

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Introduction Health hazards due to extensive use of pesticides (organochlorine (OC) and organophosphate (OP)) is obvious in the third world countries. Therefore to ensure the safety of workers in the field, health surveillance is required. OC and OP pesticides used in the field mainly consist of aldrin, BHC, dimethoate, phosphomidon, endosulfan, malathion, carbofuran.

Methods and Materials The present study was undertaken among the field workers in the Katazar area of Barpeta District who were employed in the handling of pesticides. Exposed agricultural workers were studied alongside 100 control workers who were not spraying pesticides. Age, Sex and Blood pressure were measured in both group. Toxic symptoms were recorded including neurological and gastrointestinal disease.

Results Most of the farmers suffered from excessive sweating (41.3%, RR=1.65), burning of the eyes (41.3%, RR=1.65), excessive salivation (10.0%, RR=1.66), fatigue (18%, RR=1.86), dizziness (25.5%, RR=1.45), muscle weakness (9.3%, RR=1.12), blurred vision (11.3%, RR=0.96), and chest pain (9.3%, RR=0.97).

Conclusion The application of safety measures, public awareness and training of the farmers about the safe handling of pesticide

along with the use of protective devices are suggested. In addition, the possible use of comparatively less toxic pesticides specifically in place of malathion, phosphomidon and BHC are suggested. The use of carcinogenic pesticides and cancer rates among the workers in area is a further concern and area for future study.

SP4-9 METABOLIC PROFILE INFLUENCE ON HbA1c IN DIAGNOSING DIABETES MELLITUS

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Aims To evaluate the optimum HbA1c cut-off for lowering number of people with undiagnosed type 2 diabetes mellitus (T2DM).

Materials and Methods Population-based screening for glucose metabolism impairments (GMI) among 661 adults in Moscow Country was conducted in 2009. HbA1c was determined in 39 subjects with GMI. T2DM was diagnosed according to WHO 1999 criteria. Receiver operating characteristics (ROC) analysis was performed to assess best predictive cut-off HbA1c for diagnosing T2DM.

Results Based on OGTT and HbA1c, 15% and 28% people had T2DM. Area under ROC curve (AUROC) was 0.727 (95% CI 0.490 to 0.964, $p=0.080$, sensitivity 66.7%, specificity 78.8%) using ADA-recommended HbA1c cut-off $>6.5\%$. Best predictive HbA1c in this cohort was 6.3% (AUROC 0.750, $p=0.054$, sensitivity 83%, specificity 67%). 33.0% of undiagnosed T2DM had HbA1c levels $<6.5\%$ (95% CI 0% to 71%) and 17% of people with T2DM had HbA1c levels $<6.3\%$. Subjects with false negative HbA1c were predominantly with normal BMI (21.8 \pm 1.6 vs 42.9 \pm 7.8, $p=0.025$), false positives were predominantly with higher BMI (30.6 \pm 7.8 vs 28.4 \pm 5.9, $p=0.273$). In normal weight (BMI 18–25) individuals optimal HbA1c cut-point for detecting T2DM was $>6.0\%$ (AUROC 0.750, sensitivity 50%, specificity 100%). RR of T2DM was 7 (1.18–42.9) with HbA1c values 6.0–6.4%, than those with <6.0 in normal weight individuals.

Conclusion Choosing the HbA1c strategy rather than the OGTT strategy leads to diagnose more diabetes, although the consistency of both diagnostic criteria is low. The optimal HbA1c cut-point to detect T2DM was lower than HbA1c of 6.5% in normal weight individuals.

SP4-10 PREVALENCE AND FACTORS ASSOCIATED WITH IRRITABLE BOWEL SYNDROME AMONG MEDICAL STUDENTS OF KARACHI: A CROSS-SECTIONAL STUDY

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Introduction Irritable bowel syndrome is commonly reported among university students, however few analytical based studies are available on IBS from Pakistan. We investigate the prevalence and pattern of symptoms of IBS along with anxiety among medical students of Karachi.

Methods A cross-sectional study was conducted among 360 medical students of Karachi. Data were collected using validated tool "Rome III Criteria" and Generalised Anxiety Disorder Questionnaire. Diagnosis were made on the criteria that students experiencing abdominal discomfort at least 2–3 days/month, also had high level of Anxiety. Convenient sampling was done to recruit the participants after getting written informed consent.

Results The prevalence of IBS was found to be 102 (28.3%) with a predominance of 87 (85.29%) in females than males 15 (14.71%).

The psychological symptoms of anxiety were encountered in 57 (55.8%) participants with IBS, among which, male were 15.7% and female 84.2% respectively.

Conclusion The medical students of Karachi who suffered more mental stress and anxiety resulted in a high level IBS as compared with previous study reports. There were significantly more women with IBS than men. As a consequence, key health messages and interventions to reduce stress and anxiety among students may help in curtailing the burden of this disease.

SP4-11 METABOLIC PROFILE INFLUENCE ON HbA1c IN DIAGNOSING DIABETES MELLITUS

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Aims To evaluate the optimum HbA1c cut-off for lowering number of people with undiagnosed type 2 diabetes mellitus (T2DM).

Materials and Methods Population-based screening for glucose metabolism impairments (GMI) among 661 adults in Moscow Country was conducted in 2009. HbA1c was determined in 39 subjects with GMI. T2DM was diagnosed according to WHO 1999 criteria. Receiver operating characteristics (ROC) analysis was performed to assess best predictive cut-off HbA1c for diagnosing T2DM.

Results Based on OGTT and HbA1c, 15% and 28% people had T2DM. Area under ROC curve (AUROC) was 0.727 (95% CI 0.490 to 0.964, $p=0.080$, sensitivity 66.7%, specificity 78.8%) using HbA1c cut-off $>6.5\%$. Best predictive HbA1c in this cohort was 6.3% (AUROC 0.750, $p=0.054$, sensitivity 83%, specificity 67%). 33.0% of undiagnosed T2DM had HbA1c levels $<6.5\%$ (95% CI 0% to 71%) and 17% (95% CI 0% to 45%) of people with T2DM had HbA1c levels $<6.3\%$. Subjects with false negative HbA1c were predominantly with normal BMI (21.8 ± 1.6 vs 42.9 ± 7.8 , $p=0.025$), false positives were predominantly with higher BMI (30.6 ± 7.8 vs 28.4 ± 5.9 , $p=0.273$). In normal weight (BMI 18–25) individuals optimal HbA1c cut-point for detecting T2DM was $>6.0\%$ (AUROC 0.750, sensitivity 50%, specificity 100%). RR of T2DM was 7 (1.18–42.9) with HbA1c values 6.0–6.4%, than those with <6.0 in normal weight individuals.

Conclusion Choosing the HbA1c strategy rather than the OGTT strategy leads to diagnose more diabetes, although the consistency of both diagnostic criteria is low. The optimal HbA1c cut-point to detect T2DM was lower than HbA1c of 6.5% in normal weight individuals.

SP4-12 HOW "HEALTHY" ARE THE CLIMATE CHANGE CONFERENCES?

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Since the first UN Conference on Human Environment held in Stockholm in 1972, up to COP16 numerous international conferences have been organised by UNEP, WMO, IPCC, AsDB/AfDB, UNDP, World Bank and of course UNFCCC. All of these prescribed economic development as the gateway to adaptation to and mitigation of emission of green house gases and global warming. Attention has been given to agriculture, fishery, topography, geography, land quality, tourism, livelihood, water resources management, waste management, forestry, environmental sanitation, public education, training, human resource development etc.;

while health or disease were mentioned barely and episodically, to be forgotten in between. That health is the centre piece of development has not dawned upon. The drafters of resolutions and conference records, seems, never included any public health expert or epidemiologist. This has prompted Africa, South Asia, South East Asia, the Far East and the Pacific rim countries to request UNFCCC to accord due importance to health as a key element of adaptation to climate change. Based on a study of the relevant documents on climate change (referred to in the main paper), which evidently side tracked health as an issue of sufficient importance, we suggest that: (1) a monograph be produced by the UNFCCC on the remits and ranges of the impacts of climate change on health and disease; (2) due importance be given to health in the "negotiating document" of UNFCCC; and (3) public health experts and epidemiologist are included in the different committees of UNFCCC and GEF.

SP4-13 DIFFERENCES IN CHILDREN'S AND ADULTS VULNERABILITY TO AIR AND WATER POLLUTION

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Objective To discuss the differential susceptibility of children to environmental exposures using mortality rates for children and adults for infectious respiratory and gastrointestinal problems.

Materials and Methods We conducted an ecological study. We examined the trend in mortality rate from acute respiratory infections and acute diarrhoeal diseases and compared this with the consumption of chlorofluorocarbons—CFCs (air pollutant) and coverage of sewage services in Brazil. We used the polynomial regression model for assessment of trends, which were compared according to age categories with air pollution or water pollution proxy).

Results The consumption of CFCs was associated with increased mortality from the respiratory infection Agura. Increased sewage service coverage was associated with reduced mortality. This relationship was more pronounced in children than in adults.

Conclusion This new knowledge about children and susceptibility to environmental agents will help to identify subgroups and allow age sensitive planning of preventive actions.

SP4-14 PASSIVE SMOKING IN BRAZIL: RESULTS FROM THE SPECIAL RESEARCH ON SMOKING 2008

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Introduction Passive smoking has been linked to an increased morbid-mortality risk, mainly by cardiovascular and respiratory diseases. This is first Brazilian nationwide study that describes indoor passive smoking, at home and at work, among participants (15+ years) of the "Special Research on Smoking," a sub-sample of the PNAD2008, a representative national home survey.

Methods Non-smokers who reported exposure to indoor household smoking were classified as daily or occasional passive smokers, based on the frequency of exposure. People with indoor occupations, who were non-smoker and reported exposure to smoking during their work journey were classified as worksite passive smokers. Associations with socio-demographic factors were verified by logistic regression analysis.