



6<sup>th</sup> International Conference on

# EPIDEMIOLOGY & PUBLIC HEALTH

October 23-25, 2017 | Paris, France

Nested approach and the possibility of assimilation

## Workshop

### Day 1

Epidemiology 2017

6<sup>th</sup> International Conference on

# EPIDEMIOLOGY & PUBLIC HEALTH

October 23-25, 2017 | Paris, France



## Toshiko Sawaguchi

*National Institute of Public Health, Japan*

### **MENTAL ALTERATION WITH EXTERNAL CAUSES OF DEATHS: APPROACH VIA SEMI-NESTED LAYERED LOGISTIC REGRESSION ANALYSIS FOR TRAFFIC ACCIDENTAL DEATHS IN 2016**

**Aim:** The accuracy level of the analytical report of state undertaking surveys has included some points of discussion. It would be honoured this study could show one situation about this problem.

**Materials & Methods:** The survey using the health related quality of life (SF-8) survey described in the report of state undertaking to support of traffic accident bereaved families by the Director General for Policy on Cohesive Society in the Cabinet Office in 2016 was analysed using the approach via semi nested layered logistic regression analysis and the mental alteration in infants after the deaths of familial members by traffic accidents.

**Results:** The results of this analysis was compared with the original results of the health-related quality of life (SF-8) survey using the visual comparison of mean value with the adjusted standardized Japanese score. In the eight items of the health related quality of life (SF-8), the most strengthened item via the visual comparison of mean square is the body pain and on the other hand, only the daily property function associated with mentality has the statistically effectible odds-ratio with effectible 95%confidence interval.

**Impressional Conclusion:** The both results are different each other and we could recognize it would not be unit to describe the world.

#### **Biography**

Toshiko Sawaguchi has been acting as an originally paediatric forensic pathologist and moved to the epidemiology and public health field since 1<sup>st</sup> April 2015 as the research managing director.

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# EPIDEMIOLOGY & PUBLIC HEALTH

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## Toshiko Sawaguchi

*National Institute of Public Health, Japan*

### PHYSICAL & MENTAL ALTERATION WITH EXTERNAL CAUSES OF DEATHS: APPROACH VIA NESTED LAYERED LOGISTIC REGRESSION ANALYSIS FOR TRAFFIC ACCIDENTAL DEATHS IN 2011

**Aim:** To re-considerate the possibility to understand the physical and mental alteration via support project by the Japanese Cabinet Office.

**Materials & Methods:** The subject of this study is the results of WEB questionnaire for the support of the children with the death of families after traffic accidents in 2011 carried out by the Japanese Cabinet Office. The 4 items on the physical difficulty after traffic accidents, the 13th items on the change of behaviors after traffic accidents, the 10<sup>th</sup> items on mental alteration after traffic accidents were extracted and scaled each by 6 semi-ordered scale. Nested logistic regression analysis was performed using SAS EG7.1. Cumulative logit model with Newton-Raphson with Ridging and Stepwise selection was performed. Nested structures were constituted by upper level structure including 3 items such as physical difficulties+behavioral changes+mental alteration), by middle level structure including plural items those made each 3 items in the upper level and by lower level structure including 6 scales of each item in the middle level. The percent value by 6 scales was used as quantitative variables and superior 3 items were used as group variables. Nested treatments were carried out plural items in the middle level structure to the quantitative variables those are the percent value by 6 scales.

**Results & Conclusion:** Judged as the criterion of model convergence, score test, statistic of goodness, arranged R2 etc., the model of physical difficulty was best for goodness and insomnia(13.2644:95%CI 0.402-0.2094), energy loss(9.3626:95%CI 0.0373-0.2125), and under the weather(6.5611:95%CI 0.0311-0.2063) were most contributable factors for physical and mental alteration after traffic accident families. This result could give the different impression from the results by the Japanese Cabinet Office.

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## *Toshiko Sawaguchi*

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### **FLAME SETTING OF HEALTH PROMOTION ACROSS THE TIME - AS THE PREMISE OF THE HEALTH ASSESSMENT FOR MEDICAL ACCESS (ACCESS ASSESSMENT: AA)**

**Aim:** The aim of this presentation is to totalize and inform my own personal prospects in nowadays health promotion.

**Materials & Methods:** As the premise of the prospects, hopefully rather new aspects should be involved on the conventional basis of health promotion via free observation.

**Results:** Tailor made medicine is already well known concept. In order to develop actions on medicine and health in better attitudes, & tailor made health could be considerate. Additionally, tailor made wealth could be also prepared. At the time to build up the national medical and health politics, social epidemiology and public health is necessary. However, in the regional area, for actual action of health, welfare and medicine should develop on each citizen. Nowadays, health promotion is re-recognized as the life health promotion. Not only in single genetic diseases but also in polygenetic diseases, epigenetic factors could contribute. All know "From the cradle to the grave". In addition, before the cradle, health for fetus and expectant mothers should be important and after the cradle, health for the next generation and the next after next generation would exist. This is time across flame setting in health promotion via generations. Not only health science for prevention but also health science for medicine is needed in the course of home health and medical care. In these situations, in order to access to medical care from the health and welfare side, more concrete criterion for medical access is needed. We call this as health assessment for medical access or access assessment (AA) provisionally.

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## Toshiko Sawaguchi

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### AS ONE EXAMPLE OF TRIALS OF HEALTH ASSESSMENT FOR MEDICAL ACCESS-VOICE APPROACH OF IDENTIFICATION OF DIFFERENT PLURAL PERSONAE IN DISSOCIATED IDENTIFY DISORDER (DID) PATIENTS

**Aim:** The aim of this study is to initialize of voice approach in DID patients by which health side could access medical experts in the regional health area. It has been already known about 30% of DID patients led to suicides and the rapid change of persona is the high-risk sign of suicide. Here it was tested preliminarily if the discrimination of plural personae could be possibly performed.

**Materials & methods:** The voice of DID patients were recorded from You Tube and analysed using PRAAT (software). In this study, the voice of DID patients by each personae was quantified and generalized linear analysis and logistic regression analysis with nest treatment were performed using SAS GENMOD Procedure and LOGISTIC procedure.

**Results:** In the generalized linear model, the model using S.D. similarity showed the good fit shown as the followings,  $\chi^2=8.4$  in type 1& 3 analysis,  $P>0.0383$ , the possibility of discrimination of different personae in one individual body would be shown as the followings, Persona A: Odds=6.31, 95%CI=0.0007-0.0059, and Persona B: Odds=5.15, 95%CI=0.0003-0.0042. Also this possibility of discrimination could depend on the difference of syllables.

**Conclusion:** Without forensic statistics, using a general statistical method with nested treatments, some interpretations could be possible and if the assimilation and the validity of the model were not enough, something could be given to interpreting even for the personal identification in one body.

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# EPIDEMIOLOGY & PUBLIC HEALTH

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# Scientific Tracks & Abstracts Day 1

Epidemiology 2017

# Sessions:

Day 1 October 23, 2017

**Epidemiology and Public Health | Medicine | Infectious Diseases | Surveillance | Genomic Research | Epidemiology and Immunology | Zoonosis | Sociology | Biostatistics | Environmental Health**

## Session Chair

**Jean Caron**

McGill University, Montreal Canada

## Session Co-Chair

**Wolfgang Seger**

Health Advisory Board, Germany

### Session Introduction

**Title: Mental health among a cohort of women in coastal Louisiana affected by the Deepwater Horizon oil spill**

**Edward S Peters** | LSUHSC School of Public Health | USA

**Title: Callers' perceptions of receiving advice via a Medical Care Help Line**

**Mayvor Ström** | Primary Health Care | Sweden

**Title: Suicide attempt in adulthood predicted by childhood cognitive ability and academic performance: A cohort study of 26000 women and men**

**Alma Sörberg Wallin** | Karolinska Institute | Sweden

**Title: Hidden burdens for women and girls: Why is menstrual management not on the public health agenda in OECD countries?**

**Sarah Donovan** | University of Otago | New Zealand

**Title: Effect of use of mobile phones on sleep and general health of adolescents of age group 16-19 years**

**Arti Uniyal** | Maulana Azad Medical College | India

**Title: Factors associated with the changes in depressive symptoms in older adults: A follow-up study**

**Susan C Hu** | National Cheng Kung University | Taiwan

**Title: Overcoming barriers: Monitoring labour market outcomes of entering occupational rehabilitation**

**Anton Nivorozhkin** | Institute for Employment Research | Germany

**Title: Impact of feeding practices on health and nutritional status of the children in urban and rural Haryana**

**Harshdeep Joshi** | Punjab Institute of Medical Sciences | India

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## MENTAL HEALTH AMONG A COHORT OF WOMEN IN COASTAL LOUISIANA AFFECTED BY THE DEEP-WATER HORIZON OIL SPILL

**Edward S Peters\***

\*Louisiana State University Health Sciences Center, USA

**Statement of the Problem:** The Deepwater Horizon Oil Spill (DHOS) was the largest accidental marine oil spill in the history of the US petroleum industry, dwarfing all prior oil tanker spills in magnitude and impact on the environment and causing extensive damage to marine and wildlife habitats. It contaminated over 1,000 miles of beach and marsh shoreline from Texas to Florida and threatened the viability of the northern Gulf's commercial fishing and tourism industries. The Women and Their Children's Health study was established to examine health effects from the DHOS among a cohort of 2800 women and 650 children in Louisiana. Psychological sequelae are among the most pronounced effects in populations following exposure to oil spills. Women in particular represent a vulnerable yet influential population but have remained relatively understudied with respect to the DHOS.

**Methodology:** A baseline telephone interview in 2012, obtained data on physical/mental health and exposure to the oil spill. A follow-up interview was completed in 2016. Exposure to the DHOS was assessed measuring an individual's physical and economic experience of the spill. Generalized linear models were fit to estimate the association between DHOS exposure and mental health outcomes among the adult women cross-sectionally at baseline then subsequently over time.

**Findings:** We observe that this population has experienced numerous traumatic events in their lifetime; further the DHOS exposure is associated with increased severity of depression, stress and PTSD symptoms.

**Conclusion & Significance:** Although additional work is necessary to disentangle this single event from other natural disasters and traumatic events that have occurred in this population, this technologic disaster has had long-lasting negative effects on the psychological well-being of a vulnerable community. Our findings support the adverse impact of disaster exposures on mental health symptoms in women and identify potential targets for post-disaster mitigation.

### Biography

Edward S Peters is Professor and Chair of the LSU School of Public Health's Epidemiology Program and Director of the School's Epidemiology Data Center. His research interests focus on using classic and molecular epidemiologic tools to examine molecular and biologic heterogeneity and susceptibility of chronic diseases. More recently this research has begun including aspects of social epidemiology to examine how the effects of social determinants of health influence disparate disease outcomes through a transdisciplinary perspective. He is the Co-PI of the Women's and Their Children's Health Study that was established to examine the health effects from the Deepwater Horizon Oil Spill. He has active research projects in oral, ovarian, and prostate cancer. In addition, through his work in the Louisiana Tumour Registry he works on efforts to improve cancer surveillance for HPV related cancers, bioinformatics and molecular pathology.

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## CALLERS' PERCEPTIONS OF RECEIVING ADVICE VIA A MEDICAL CARE HELP LINE

**Mayvor Strom<sup>a</sup>, Bertil Marklund<sup>a,b</sup> and Cathrine Hildingh<sup>a,c</sup>**<sup>a</sup>Primary Health Care, Sweden<sup>b</sup>University of Gothenburg, Sweden<sup>c</sup>Halmstad University, Sweden

**Background:** Telephone consultations with specially trained nurses are becoming an increasingly common form of care.

**Aim:** To describe patients' perceptions of receiving advice via a medical care help line.

**Results:** The patients perceived the help line as a professional, reliable and easily accessible asset in everyday life, that self-care is promoted through personal advice and that the help line is a partner with whom one can discuss reflections and feelings. It is also a kind of "back up". The advice service is perceived as satisfactory when the nurse is calm, friendly, confirming and shows respect. Compliance and acceptance are enhanced when patients feel involved in the decision-making process. The fact that the service is easily accessible is perceived as simple and time-saving.

**Conclusions:** Seen from the patient's perspective, the telephone contact with the help line is a simple, easily accessible and secure alternative that is appreciated and used. Caring encounters gave rise to feelings, influenced by the agreement between one's own needs and expectations, the encounter between human beings and the care provided. More in-depth studies are needed focusing on the patient's perspective and characterises of the caring encounter over the telephone.

**Relevance to Clinical Nursing:** Improved understanding of the patient's perspective on the care provided leads to increased staff satisfaction and motivation. Care encounters by phone are common today for nurses and their well-being at work is beneficial for both them and the care they provide and thereby for the patients.

### Biography

Mayvor Ström completed PhD at the Sahlgrenska Academy in 2009 in Sweden and a trained nurse/midwife in service with Master degree in Environmental Medicine. Mayvor Ström has spent a lot of time in telephone contact with patients during her almost 40-year career. Mayvor Ström thinks that the daily care meeting is a crucial and very important part of overall care. Caring meeting by phone has many dimensions, as power perspective, patient perspective, and of course the staff perspective.

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## SUICIDE ATTEMPT IN ADULTHOOD PREDICTED BY CHILDHOOD COGNITIVE ABILITY AND ACADEMIC PERFORMANCE: A COHORT STUDY OF 26000 WOMEN AND MEN

**Alma Sorberg Wallin\***

\*Karolinska Institute, Sweden

Suicidal behaviour is of public health importance, and is increasing in young populations. Academic performance in youth measured in Grade Point Average (GPA), predicts suicide attempt but the mechanisms are not known. It has been suggested that general cognitive ability might underlie the association. We followed 26,315 Swedish women and men in the population-representative evaluation through follow-up cohorts, up to maximum 46 years of age, for a first suicide attempt in recorded in the national inpatient register. Associations between GPA at age 16, IQ measured in school at age 13 and suicide attempt were investigated in Cox regression and mediation analyses, with control for potential confounders including socioeconomic position. There was a clear graded association between lower GPA and subsequent suicide attempt. With control for potential confounders, those in the lowest GPA quartile had a near five-fold risk (HR 4.9, 95% CI 3.7-6.7) compared to those in the highest quartile. In a mediation analysis, the association between GPA and suicide attempt was robust while the association between IQ and suicide attempt was fully mediated by GPA. To conclude, academic performance in compulsory school was a robust predictor of suicide attempt past young adulthood. Rather than IQ accounting for the association, the association between IQ and suicide attempt was mediated by academic performance, highlighting the role of academic performance in long-term suicidal risk. Future studies should further investigate the key mechanisms in this association, and if interventions to improve academic performance have a long-term preventive effect on suicidal behaviour.

### Biography

Alma Sorberg Wallin has a background in Clinical Psychology and completed her PhD in Social Epidemiology at the Karolinska Institute in Stockholm, Sweden, in 2015. She is currently working as Postdoctoral Researcher in a project on origins of educational gradients in health. She is a Managing Editor of the *European Journal of Public Health*. Her main interests are in Psychiatric Epidemiology and Suicidology.

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## HIDDEN BURDENS FOR WOMEN AND GIRLS: WHY IS MENSTRUAL MANAGEMENT NOT ON THE PUBLIC HEALTH AGENDA IN OECD COUNTRIES?

**Sarah Donovan\***

\*University of Otago, New Zealand

Issues relating to the management of menstrual pain and flow (including access to affordable menstrual products and pain relief) are the main reason for missed school and work for women in girls in any country. However, these barriers to participation in normal daily activities such as work and school have rarely been considered as within the purview of public health.

While inadequate access to health education and menstrual management products is recognized by UNESCO as important cultural and socioeconomic barriers for women and girls in developing countries, it is widely assumed that within OECD countries these basic necessities are readily accessible by all. However, there is evidence that in a context of growing social inequality within high-income countries, significant economic and cultural barriers to satisfactory menstrual management do now exist for women and girls. As a case study, the presenter will discuss recent media coverage and advocacy work on girls missing school in New Zealand due to the unaffordability of pads and tampons, and the inadequate provision of sanitary disposal units in schools. She will also present findings from her recent and on-going qualitative studies investigating the impact of Primary Dysmenorrhea on the lives of New Zealand women and adolescent girls.

This presentation argues that menstrual management should be recognized as a significant health equity issue in OECD countries, warranting further investigation of the extent to which access to menstrual management products and pain relief now varies significantly along socioeconomic lines.

### Biography

Sarah Donovan is a sociologist with a focus on the social determinants of health. She has also worked as a midwife. Her doctoral research (2010, Victoria University of Wellington) focused on prenatal screening for Down Syndrome in New Zealand, and investigated women's experience of prenatal screening decisions, and the relationship of this experience to principles of individual choice and informed consent. Current research focuses on menstrual pain, and cost of menstrual products as a barrier to school attendance. She currently teaches in the postgraduate Diploma of Public Health at the University of Otago, New Zealand.

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## EFFECT OF USE OF MOBILE PHONES ON SLEEP AND GENERAL HEALTH OF ADOLESCENTS OF AGE GROUP 16-19 YEARS

**Arti Uniyal\***

\*Maulana Azad Medical College, India

**Statement of the problem:** Today mobile phones have become an indispensable tool because of the countless perks it provides. However, this extensive use has led to exposure to a dangerous level of electromagnetic waves. Adolescents are at an age where good quality sleep, mental and physical wellbeing is of utmost importance. Sadly, to keep up with today's fast paced, technologically oriented society, they engage in habitual mobile phone use which affects their cognitive function and general wellbeing. Difficulty in "shutting off" leads to various sleep disturbances.

**Purpose:** The purpose of this study is to address the increasing extent of mobile phone use among adolescents and its effect on their general health and sleep. Less research has been done in this field and holds great significance today.

**Methodology & Theoretical Orientation:** A cross sectional study was performed under which a total of 225 High School and College students were interviewed in the form of a semi-structured questionnaire assessing their frequency and pattern of mobile use. General health questionnaire-12 and Pittsburgh sleep Quality index questionnaire-9 were included to assess their levels of stress and sleep problems respectively. The students were interviewed after taking a written informed consent and being assured of their confidentiality.

**Findings:** This study revealed that more than half (~60%) of the adolescents used mobile phones regularly. A significant association was found between the usage hours and physical symptoms reported as well as with calculated levels of distress. Association between poor quality sleep and hours of calling and internet usage was also found.

**Conclusion & Significance:** This raises an important question of how this overuse can affect our future and how can we make amends. A huge step would be to help our children keep a check on their levels of use and involve in other recreational activities.

### Biography

Arti Uniyal has recently graduated from Maulana Azad Medical College. She performed this research during her third year of medical school with the guidance of Dr. Pragya Sharma of the Department of Community Medicine. At a very young age she developed the quest for research and realized the relevance of this research topic in today's world. Her research received recognition by the Indian council of Medical Research and she was awarded for the same. She is currently pursuing her internship and continues to gain experience in medical skills as well as dedicatedly involves in more research in the medical field.

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## FACTORS ASSOCIATED WITH THE CHANGES IN DEPRESSIVE SYMPTOMS IN OLDER ADULTS: A FOLLOW-UP STUDY

Susan C Hu<sup>a</sup> and Yan Ping Lin<sup>a</sup><sup>a</sup>National Cheng Kung University, Taiwan

**Background:** Late life depression is an important public health issue. Very limited studies have focused on the changes in depressive symptoms in the elderly. The aims of the study were to examine factors associated with the deterioration or improvement in depressive symptoms in older adults.

**Methods:** Four waves of the survey “Taiwan Longitudinal Study on Aging” from 1996 to 2007 were used. A total of 5,088 older adults aged 50 and over were selected. Depressive symptoms were measured using a 10-item depression scale (CESD, scores 0-30), dividing into 3 groups: no (0), low (1-9), and high ( $\geq 10$ ). The changes in depressive symptoms were composed of 9 situations: no-no, no-low, no-high; low-low, low-high, low-no; high-high, high-low, high-no. Socio-demographic factors, health behaviours, and health status were examined for the changes in depressive symptoms by using Hierarchical Linear Modelling (HLM) method.

**Results:** There were 52.6% of participants remaining the same depression status, 24.9% in deterioration, and 22.5% in improvement. In deterioration situations, no exercise was associated with no-low status, and female, older age; and poor health were more to be associated with low-high status. In improvement situations, having spouse, being employed, and good health were associated with high-low status; and higher education, good health, without chronic disease and regular exercise were associated with low-no status.

**Conclusion:** No exercise and poor health were associated with the deterioration in depression, whereas having spouse, being employed, good health, and engaging in regular exercise were related to the improvement in depressive symptoms in older adults.

**Key Messages:** 1. Little research has showed the changes in depressive symptoms in the elderly. 2. About one fourth of older adults were in deterioration status, whereas more than one-fifth were in improvement status. 3. Exercise, employment and health status were associated with the deterioration or improvement in depressive symptoms in older adults.

### Biography

Susan C Hu is an Associate Professor in the Department of Public Health, National Cheng Kung University. Her research interests focus on health behaviour and health promotion, especially for the older adults. Currently, she serves as the PI of Active Aging Project in Taiwan.

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## OVERCOMING BARRIERS: MONITORING LABOUR MARKET OUTCOMES OF ENTERING OCCUPATIONAL REHABILITATION

**Anton Nivorozhkin\***

\*Institute for Employment Research, Germany

**Statement of the Problem:** The goal of occupation rehabilitation is to preserve existing employment relationship and to promote long-term integration into working life and thereby ensure social and economic participation of people with disabilities. Against this background, this paper compares labor market outcomes of people that were accepted to participate in occupational rehabilitation to people that were rejected. The analysis is concentrated on a group of adult applicants in return-to-work occupational rehabilitation scheme in 2008. We follow labor market outcomes of accepted and rejected applicants up to the end of 2014 and thus we can estimate short and long-term effects of entering occupational rehabilitation.

**Methodology & Theoretical Orientation:** Direct comparison of labor market outcomes of accepted and rejected applicants is biased because these groups differ systematically. Participation in occupational rehabilitation is typically offered to persons that are both in need of a programme (due to occupational disability) and can benefit from it. Moreover, as documented in previous sections, groups of rejected and accepted applicants differ in terms of socioeconomic characteristics and labor market history. To address the selection issue, we follow a seminal study of Rosenbaum and Rubin (1983) who proposed to compare (match) observations based on the predicted probability (propensity score) to participate in a programme (in our case acceptance to participate in occupational rehabilitation). Comparison based on a propensity score is unbiased under the assumption that all relevant covariates that explain acceptance to participate in occupational rehabilitation and outcomes are simultaneously observed.

**Conclusion & Significance:** Our main finding is that three years after the application, the group of accepted applicants relative to the group of rejected applicants had the higher share in regular employment and a lower share of recipients of unemployment and basic income support benefits. Results of the analysis are used to strengthen monitoring of the effects of occupational rehabilitation and to identify groups that are more likely to benefit from take-up of occupational rehabilitation. Sensitivity analysis suggests that the results are robust, but to obtain more precise estimates of the effects of occupational rehabilitation improvements in data collection are warranted.

### Biography

Anton Nivorozhkin has his expertise in the evaluation of social programmes in developed and transition economies. As a Ph.D. candidate at Goteborg University (Sweden), he extensively studied labor market and social protection programmes in Russia and Sweden. Later, as a researcher at the Institute for Employment Research in Germany, he analyzed policies that increase labor market attachment of social welfare benefit recipients. He has also worked as a labor market economist at the OECD and as a consultant for the World Bank and contributed to the reports on employment and social protection policies in Russia, Lithuania and Kazakhstan.

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## IMPACT OF FEEDING PRACTICES ON HEALTH AND NUTRITIONAL STATUS OF THE CHILDREN IN URBAN AND RURAL HARYANA

**Harshdeep Joshi\***

\*Punjab Institute of Medical Sciences, India

**Background:** Infant feeding practices are directly linked to nutritional status of the child. About 2/3<sup>rd</sup> of deaths in young children occur due to inappropriate feeding practices.

**Aims & Objectives:** To study impact of feeding practices on health and nutritional status of the children.

**Materials & Methods:** It was community based cross-sectional study conducted among 1267 children between age group of 0-24 months in the urban and rural field practice areas of Department of Community Medicine, Maharishi Markandeshwar Institute of Medical Sciences and Research, Mullana, District Ambala, Haryana. A self-designed semi structured questionnaire was used to assess mother's knowledge, trends and determinants of infant and young child feeding practices and this was followed by anthropometry.

**Results:** In the current study it was observed that 33.1%, 44.1% and 14.4% children were underweight, stunted and wasted respectively. Factors like mother's education, occupation and type of family significantly ( $p < 0.001$ ) influenced nutritional status of the child as 39.8% underweight children belonged to mothers who were educated up to high school only; also 35.7% underweight children were more in category of unemployed mothers. Feeding practices like feeding colostrum, duration of breastfeeding and time of initiation of complimentary feeds significantly ( $p < 0.005$ ) influenced weight and height of the child. Also, exclusively breastfed children had significantly ( $p < 0.001$ ) less episodes of diarrhea as compared to non-breastfed counterparts.

**Conclusion:** Feeding practices significantly influence health and nutritional status of the child. Therefore, mothers must be correctly educated regarding right feeding practices.

### Biography

Harshdeep Joshi has been working as an Assistant Professor in Department of Community Medicine in Punjab Institute of Medical Sciences. She graduated from Jammu and Kashmir and thereafter pursued MD in Community Medicine. Her main area of interest is Mother and Child Health and her thesis topic was "An assessment of Trends in Infant and Young Child feeding Practices among Rural and Urban Mothers of Haryana and its impact on health and nutritional status of the child using newly developed WHO Indicators". She has presented Seminars on: Pedagogy, Infant feeding practices, Training on Public Health Nutrition, National Population Policy and Revised National Tuberculosis Program. She has also presented at Journal Clubs on various related topics. She has a versatile research work with more than 10 publications to her credit which were published in journals of international repute. Her research work mainly focuses on vitamin D deficiency in women, adolescent health, maternal and child health. She is also a Member of Medical Education Unit in her Institution and has organized CME on Women's Health. She has also written articles in different newspapers and is a proactive teacher.

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# EPIDEMIOLOGY & PUBLIC HEALTH

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## Scientific Tracks & Abstracts Day 2

Epidemiology 2017



# Sessions:

Day 2 October 24, 2017

**Epidemiology and Antibiotic Resistance | Infectious Disease | Congenital Heart Disease |  
Disease control | Etiology**

**Session Chair**

**Henry Völzke**

University Medicine Greifswald, Germany

**Session Co-Chair**

**Ray M Merrill**

Brigham Young University, USA

## Session Introduction

**Title: Multiple pregnancies: Risk factors of preterm birth, hypertensive disorders of pregnancy and small for gestational age, in two French urban areas**

**Anne-Sophie Mariet** | Bourgogne Franche-Comté University | France

**Title: Investigating the causal effect of smoking on hay fever and asthma: A Mendelian randomization meta-analysis in the carta consortium**

**Tea Skaaby** | Research Centre for Prevention and Health | Denmark

**Title: Factors associated with Secondhand smoke incursion at homes in multiunit housing: Cross sectional study in Seoul, Korea**

**Jeonghoon Kim** | Seoul National University | South Korea

**Title: Trends of operating room-based glaucoma procedures in France from 2005 to 2014: A nationwide study**

**Anne-Sophie Mariet** | Bourgogne Franche-Comté University | France

**Title: New insights on congenital anomaly case ascertainment using primary care data: The born in Bradford, multi-ethnic cohort study**

**Chrissy Bishop** | University of Bradford | UK

**Title: Effects of invitation to participate in health surveys on the incidence of cardiovascular disease: A randomised general population study**

**Tea Skaaby** | Research Centre for Prevention and Health | Denmark

**Title: Risk factors for abnormal weight in older adults: A community-based cohort study in China**

**Isaac M Danat** | University of Wolverhampton | UK

**Title: Adolescents deprived of liberty: subject of rights? Analytical overview under Foundation Care Social-Educational of Rio Grande Do Sul (Brazil) during the period from 2002 to 2014**

**Joelza M. A. Pires** | Federal University of Rio Grande do Sul | Brazil

**Title: Socioeconomic deprivation and survival in older adults with angina: A community-based cohort study in China**

**Weiju Zhou** | University of Wolverhampton | UK

**Title: The indigenous Australian malnutrition project: Measuring the burden and nature of malnutrition in regional Australian hospitals**

**Natasha F Morris** | Monash University | Australia

6<sup>th</sup> International Conference on

# EPIDEMIOLOGY & PUBLIC HEALTH

October 23-25, 2017 | Paris, France

## MULTIPLE PREGNANCIES: RISK FACTORS OF PRETERM BIRTH, HYPERTENSIVE DISORDERS OF PREGNANCY AND SMALL FOR GESTATIONAL AGE, IN TWO FRENCH URBAN AREAS

Anne Sophie Mariet<sup>a,b,c</sup>, Eric Benzenine<sup>a</sup>, Paul Sagot<sup>b</sup>, Nadine Bernard<sup>d</sup>, Didier Riethmuller<sup>e</sup>, Sophie Pujol<sup>d,e</sup>, Anne Laure Parmentier<sup>d,e</sup>, Frederic Mauny<sup>d,e</sup> and Catherine Quantin<sup>a,b,c</sup>

<sup>a</sup>University of Burgundy France

<sup>b</sup>Dijon University Hospital, France

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<sup>e</sup>Regional University Hospital of Besancon, France

The objective of this study was to analyze risk factors of preterm birth, hypertensive disorders of pregnancy and small for gestational age in a population of multiple pregnancies in two French urban areas. We included all 249 multiple pregnancies of women who lived in Besancon and in the urban unit of Dijon and delivered in one of the university hospitals of the two cities between 2005 and 2009. A retrospective data collection was conducted in obstetrical records to collect obstetrical history, individual socioeconomic factors and comorbidities during pregnancy, and characteristics of the delivery and newborns. Preterm birth was defined as birth before 36 weeks of gestational age. Small for gestational age was defined as birth weight less than the 10th percentile of birth weight for gestational age in France. Environmental exposures to noise and air pollution (NO<sub>2</sub>) were modeled at home buildings. A neighborhood socioeconomic index was calculated at the census block groups scale. The associations between potential risk factors and preterm birth, hypertensive disorders of pregnancy and small for gestational age were analyzed by logistic regression models. Preterm birth was observed in 152 pregnancies and hypertensive disorders in 30 pregnancies. Among 506 newborns, 122 were small for gestational age. Preterm birth was associated with infection ( $p=0.01$ ) and major infant congenital abnormalities ( $p=0.007$ ). A high pre-pregnancy body mass index was associated with the occurrence of hypertensive disorders during the pregnancy ( $p=0.002$ ). A small weight for gestational age was less frequent with girls ( $p=0.04$ ), the absence of pre-existing hypertension ( $p=0.02$ ), and diabetes ( $p=0.03$ ). In order to optimize the management of multiple pregnancies, risk factors of adverse pregnancy outcomes should be more precisely identified in this specific population.

### Biography

Anne Sophie Mariet is a Public Health Medical Doctor and a PhD student in Environmental Epidemiology and Biostatistics. She works in the Biostatistics and Medical Informatics unit of Dijon University Hospital. Her themes of research are the study of the effects of environmental multi-exposure to noise and air pollution on health particularly in the perinatal period, and the utilization of the hospital Medical Information System Program in epidemiology.

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# EPIDEMIOLOGY & PUBLIC HEALTH

October 23-25, 2017 | Paris, France

## INVESTIGATING THE CAUSAL EFFECT OF SMOKING ON HAY FEVER AND ASTHMA: A MENDELIAN RANDOMIZATION META-ANALYSIS IN THE CARTA CONSORTIUM

**Tea Skaaby\***

\*Research Centre for Prevention and Health, Denmark

**Statement of the Problem:** Observational studies on smoking and risk of hay fever and asthma have shown inconsistent results. However, observational studies may be biased by confounding and reverse causation. Mendelian randomization uses genetic variants as markers of exposures to examine causal effects.

**Methodology & Theoretical Orientation:** We examined the causal effect of smoking on hay fever and asthma by using the smoking-associated single nucleotide polymorphism (SNP) rs16969968/rs1051730. We included 231,020 participants from 22 population-based studies.

**Findings:** Observational analyses showed that current vs never smokers had lower risk of hay fever (odds ratio (OR) =0.68, 95% confidence interval (CI): 0.61, 0.76;  $p < 0.001$ ) and allergic sensitization (OR =0.74, 95% CI: 0.64, 0.86;  $P < 0.001$ ), but similar asthma risk (OR=1.00, 95% CI: 0.91, 1.09;  $P=0.967$ ). Mendelian randomization analyses in current smokers showed a slightly lower risk of hay fever (OR=0.958, 95% CI: 0.920, 0.998;  $P=0.041$ ), a lower risk of allergic sensitization (OR=0.92, 95% CI: 0.84, 1.02;  $P=0.117$ ), but higher risk of asthma (OR=1.06, 95% CI: 1.01, 1.11;  $p=0.020$ ) per smoking-increasing allele.

**Conclusion & Significance:** Our results suggest that smoking may be causally related to a higher risk of asthma and a slightly lower risk of hay fever. However, the adverse events associated with smoking limit its clinical significance.

### Biography

Tea Skaaby is an experienced Researcher in epidemiological, population-based preventive medicine. Her scientific focus areas are micronutrient deficiencies and other risk factors for chronic diseases including cardiovascular disease and cancer. The current study is part of a series of studies intended to investigate whether repeated health examinations with screening of various risk factors in an unselected population can prevent long-term incidence of ischemic heart disease, stroke, diabetes and mortality, etc.

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# EPIDEMIOLOGY & PUBLIC HEALTH

October 23-25, 2017 | Paris, France

## FACTORS ASSOCIATED WITH SECONDHAND SMOKE INCURSION AT HOMES IN MULTIUNIT HOUSING: CROSS SECTIONAL STUDY IN SEOUL, KOREA

**Jeonghoon Kim<sup>a</sup>, Kyoosang Kim<sup>a</sup> and Kiyoung Lee<sup>b</sup>**<sup>a</sup>Seoul Medical Center, South Korea<sup>b</sup>Seoul National University, South Korea

Second-Hand Smoke (SHS) can seep into living homes from somewhere else in or outside of a building in Multiunit Housing (MUH). The aims of this study were to examine the prevalence of SHS incursion in MUH and to assess relationships between SHS incursion and socio-demographic and home environmental factors in Korea. Population-based samples of 2,600 MUH residents ( $\geq 19$  years) in Seoul were collected through a web-based panel. The residents completed a questionnaire on socio-demographic factors, smoking status, a frequency of SHS incursion, and home environmental factors. Homes with personal smoke-free rule were determined when residents declared they lived in homes where no one smoked inside. In 2,600 residents, a frequency of SHS incursion was less likely to report residents who were smokers. Non-smoking residents who lived in homes with personal smoke-free rule were included for further analysis ( $n=1,784$ ). The residents who were experienced for SHS incursion within past 12 months were 74.7%. Multivariable ordinal logistic regression analysis resulted that residents who had more activity time at home, lived with children, supported for the implementation of smoke-free regulation in MUH, lived in homes with smaller home size, lived in homes with natural ventilation with open front doors or open both windows and front door, and lived in homes with higher frequency of natural ventilation were more likely to report SHS incursion at home. Majorities of the non-smoking residents who lived in a home with smoke-free rule were experienced for SHS incursion at home. Activity time at home, living with children, support for the implementation of smoke-free regulation in MUH, home size, methods of natural ventilation, and frequency of natural ventilation was predictors for SHS incursion in MUH. A smoke-free policy in MUH is needed to protect residents from SHS exposure when they are at home.

### Biography

Jeonghoon Kim is working in Department of Environmental Health in Seoul Medical Center in Seoul, South Korea. He is also a Ph.D. student in Graduate School of Public Health at Seoul National University and majored in Environmental Health. His study is focused on exposure science. Recently, he is more focused on Second Hand Smoke (SHS) exposure in hospitality venues and multiunit housing.

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# EPIDEMIOLOGY & PUBLIC HEALTH

October 23-25, 2017 | Paris, France

## TRENDS OF OPERATING ROOM-BASED GLAUCOMA PROCEDURES IN FRANCE FROM 2005 TO 2014: A NATIONWIDE STUDY

Catherine Quantin<sup>a,b,c</sup>, Eric Benzenine<sup>a</sup>, Alain M Bron<sup>a,b</sup>, Catherine Creuzot Garcher<sup>a,b</sup> and Anne Sophie Mariet<sup>a,b,c</sup><sup>a</sup>Burgundy Franche-Comte University, France<sup>b</sup>Dijon University Hospital, France<sup>c</sup>University of Paris-Saclay, France

**Aim:** The aim of this study is to report the trends of operating room-based glaucoma procedures from 2005 to 2014 in France.

**Methods:** We identified operating room-based glaucoma procedures (trabeculectomies, deep sclerectomies, aqueous shunts and ciliary body destructions) performed in France from 2005 to 2014 by means of billing codes from a national database. Annual rates and incidence of these procedures per 100,000 were analyzed globally and in 3 age groups: 0-14 years, 15-59 years and over 60 years.

**Results:** The annual rate of trabeculectomies slightly decreased during the study period while the rate for other surgical techniques (deep sclerectomies, aqueous drainage procedures and ciliary body destructions) increased. The rate of glaucoma surgery was 30 procedures per 100,000 inhabitants over the study period (standardized rate on the French population). There were variations over time in the rate of different types of procedures. For example, the annual rate of trabeculectomy decreased slightly during the study period from 15.6 in 2005 to 12.1 procedures per 100,000 inhabitants in 2014. Second, the rate of deep sclerectomies doubled between 2005 and 2006 from 5.3 to 10.4 procedures per 100,000 inhabitants and then declined steadily to reach 7.8 procedures per 100,000 inhabitants in 2014. Finally, the rate of aqueous drainage procedures increased over the period from 0.24 in 2005 to 0.95 procedures per 100,000 inhabitants in 2014 and the rate of ciliary body destructions increased from 1.98 to 3.02 procedures per 100,000 inhabitants during the period.

**Conclusion:** Trabeculectomy was the most commonly performed operating room-based glaucoma procedure in France from 2005 to 2014. Other modalities such as deep sclerectomies, aqueous drainage procedures and ciliary body destruction gained more acceptances among French ophthalmologists during this ten-year period.

### Biography

Anne-Sophie Mariet is a public health medical doctor and a Ph.D. student in environmental epidemiology and biostatistics. She works in the Biostatistics and Medical Informatics unit of Dijon University Hospital. Her themes of research are the study of the effects of environmental multi-exposure to noise and air pollution on health particularly in the perinatal period, and the utilization of the hospital Medical Information System Program in epidemiology.

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# EPIDEMIOLOGY & PUBLIC HEALTH

October 23-25, 2017 | Paris, France

## NEW INSIGHTS ON CONGENITAL ANOMALY CASE ASCERTAINMENT USING PRIMARY CARE DATA: THE BORN IN BRADFORD, MULTI-ETHNIC COHORT STUDY

**Chrissy Bishop<sup>a,b</sup>, Dan Mason<sup>b</sup>, Peter Corry<sup>b</sup>, John Wright<sup>b</sup>, Eamonn Sheridan<sup>b</sup>, Neil Small<sup>a,b</sup> and Roger Parslow<sup>b,c</sup>**<sup>a</sup>University of Bradford, UK<sup>b</sup>Bradford Institute for Health Research, UK<sup>c</sup>University of Leeds, UK

**Background:** In the UK Congenital Anomalies (CA) are a common cause of childhood death and disability; they are the most common cause of infant death for children of Pakistani origin. The CA rate in Bradford is nearly twice the national average. In the present study we linked children with CA in the Born in Bradford study (BiB) to General Practice (GP) data. We have used this routine data to prospectively study late diagnoses of CA and to further describe associations with risk factors for CA.

**Methods:** We used questionnaire data on 11474 babies from BiB, a prospective birth cohort study of 13857 babies and their families, for which recruitment took place between 2007 and 2011. CA cases were identified by linking cohort babies to GP records, anomalies were classified according to European Surveillance of Congenital Anomalies (EUROCAT) guidelines and coded using ICD-10. Children with one or more CA (n=708), were compared to those without CA (n=10766). We calculated univariate and multivariate risk ratios (RRs) with 95% confidence intervals for various maternal risk factors.

**Findings:** Use of routinely collected GP data increased the ascertainment of children with CA. At age one, rates for CA were 376 per 10,000 live births but accounted for only 60% of diagnoses. 40% of diagnoses were made after age one, increasing rates to 619 per 10,000 live births to age eight. Consanguinity was found to be a risk factor for anomalies in Pakistani mothers (multivariate RR 1.89, 95% CI 1.51-2.39).

**Interpretation:** 98% of UK CA registrations occur before age 1 year; our data suggest this is leading to incomplete case ascertainment. National registries should reconsider an age restriction of one for CA case ascertainment. More complete case ascertainment would provide better information for commissioners and allow funding decisions to better reflect clinical requirements.

### Biography

Chrissy Bishop worked as an Occupational Therapist for 5 years, during which she developed interests in Public Health and Policy Research. She studied her MSc in Professional Health and Social Care whilst working in the NHS, progressing her interests towards health determinants and epidemiology. She left the NHS to study a second MSc in Epidemiology and Biostatistics at the University of Leeds, during which she was introduced to the Born in Bradford Project. On graduating she was awarded a scholarship to study her PhD with Born in Bradford. Her special interests are pathways through care for children with complex healthcare needs.

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# EPIDEMIOLOGY & PUBLIC HEALTH

October 23-25, 2017 | Paris, France

## EFFECTS OF INVITATION TO PARTICIPATE IN HEALTH SURVEYS ON THE INCIDENCE OF CARDIOVASCULAR DISEASE: A RANDOMISED GENERAL POPULATION STUDY

**Tea Skaaby\***

\*Research Centre for Prevention and Health, Denmark

**Statement of the Problem:** The effects of health checks on reducing cardiovascular disease morbidity and mortality in the general population have been questioned. There are few randomized studies with long-term follow-up. We used a cohort randomly selected from a general population as a randomized trial to study the effect of repeated general health checks on the 30-year incidence of ischaemic heart disease (IHD), stroke and all-cause mortality.

**Methodology & Theoretical Orientation:** The study included all persons (n=17 845) aged 30, 40, 50 and 60 years living in 11 municipalities in Copenhagen, the capital of Denmark. An age- and gender-stratified random sample (n=4789) was invited to up to three health checks, from 1982 to 1994 (intervention group). The remaining 12 994 persons were defined as the control group. Complete follow-up on mortality, emigration and fatal and non-fatal IHD and stroke until 31 December 2012 was obtained by linkage to registries.

**Findings:** There were 3209 and 2190 incident cases of IHD and stroke, respectively, and a total of 6432 deaths during follow-up (mean = 25.2 years). The hazard ratios (HRs) (95% confidence intervals, CIs) for persons in the intervention group versus persons in the control group were as follows: IHD (HR: 0.99, 95% CI: 0.92, 1.07), stroke (HR: 1.14, 95% CI: 1.04, 1.25) and all-cause mortality (HR: 1.03, 95% CI: 0.98, 1.09).

**Conclusion & Significance:** Repeated general health checks offered to the general population had no beneficial effects on the development of IHD, stroke or all-cause mortality during 30 years of follow-up. An increased incidence of stroke was observed in the group offered health checks.

### Biography

Tea Skaaby is an experienced Researcher in epidemiological, population-based preventive medicine. Her scientific focus areas are micronutrient deficiencies and other risk factors for chronic diseases including cardiovascular disease and cancer. The current study is part of a series of studies intended to investigate whether repeated health examinations with screening of various risk factors in an unselected population can prevent long-term incidence of ischemic heart disease, stroke, diabetes and mortality etc.

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# EPIDEMIOLOGY & PUBLIC HEALTH

October 23-25, 2017 | Paris, France

## RISK FACTORS FOR ABNORMAL WEIGHT IN OLDER ADULTS: A COMMUNITY-BASED COHORT STUDY IN CHINA

Isaac M Danat<sup>a</sup> and Ruoling Chen<sup>a</sup><sup>a</sup>University of Wolverhampton, UK

**Statement of the Problem:** Maintaining normal weight will prevent ill health and prolong life. In the older population, it is also true, but older people have increased risks of obesity, overweight and underweight. Risk factors for these abnormal weights have been less investigated. We set up a cohort study in China to identify the risk factors.

**Methods:** In 2001-2003 we examined a random sample of 2917 residents aged  $\geq 65$  years from Anhui of China, documenting socioeconomic status (SES) and cardiovascular disease risk factors (CVDRFs) and recording blood pressure and physical measurements. In 2007-2009 we re-interviewed 1462 surviving cohort members, measuring body weight and height to calculate Body Mass Index (BMI). We defined participants with  $BMI \geq 28$  kg/m<sup>2</sup> as having obesity,  $BMI 24 < 28$  as overweight,  $BMI 18.5 < 24$  as normal weight and  $BMI < 18.5$  as underweight. We employed a binary logistic regression model to compute age-sex adjusted odds ratios (OR) for risk factors in obesity verse normal weight. ORs were also calculated to identify risk factors in overweight and underweight respectively.

**Findings:** Of 1462 participants, 1313 had their BMI measured, of which 55.9% had normal weight, 6.5% obesity, 24.4% overweight and 13.3% underweight. There was a significant association of obesity with high SES (e.g. adjusted OR in urban verse rural living was 1.75, 95%CI 1.10-2.79) and CVDRFs (e.g. hypertension 2.55, 1.30-5.01). There was a similar pattern for overweight associated with these risk factors (e.g. hypertension 1.55, 1.05-2.27), while watching TV increased the risk of overweight (1.84, 1.33-2.54). Surprisingly underweight was also related to high SES (e.g. adjusted OR of 1.49, 1.03-2.15 in urban), and inversely associated with baseline depression (0.57, 0.33-0.97) and smoking (0.59, 0.39-0.90).

**Conclusion & Significance:** Older adults in China have high levels of abnormal weight. Targeting high-risk groups of abnormal weight would likely improve weight management in older adults.

### Biography

Isaac M Danat is a PhD student in Epidemiology and Global Health Research under the supervisor of Dr. Ruoling Chen at the University of Wolverhampton, UK. In 2014 he was awarded Master of Public Health degree (MPH) at University of Wolverhampton after obtaining a MBA at Ahmadu Bello University and a Bachelor of Pharmacy degree at University of Jos, Nigeria. Before entry into the PhD program he worked as a Senior Analyst and a Senior Program Officer, on the Essential Medicine Project, with an international public health NGO "Clinton Health Access Initiative". His work focuses on obesity research in older population. He was a Speaker at the International Conference for Geriatrics and Gerontological Nursing at London UK, in October 2016. He is a co-author of a paper published in a peer review journal titled "The prevalence and determinants of undetected dementia in the community: A systematic review and a meta-analysis".

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# EPIDEMIOLOGY & PUBLIC HEALTH

October 23-25, 2017 | Paris, France

## ADOLESCENTS DEPRIVED OF LIBERTY: SUBJECT OF RIGHTS? ANALYTICAL OVERVIEW UNDER FOUNDATION CARE SOCIAL-EDUCATIONAL OF RIO GRANDE DO SUL (BRAZIL) DURING THE PERIOD FROM 2002 TO 2014

Joelza M A Pires\*

\*Federal University of Rio Grande do Sul, Brazil

**Statement of the problem:** The teenage offender is the result of a number of factors associated with their vulnerable condition, victim of social exclusion, and although they are not the main perpetrators of violence, relate to her so ambivalent, as victim, as aggressor. There are many risk factors, few responsible for them; In addition to the parental abandonment, father absence, truancy, of street children, drug use and many other violations of human rights. The Fundacao de Atendimento Socioeducativo of Rio Grande do Sul (FASE-RS) is responsible for the implementation of educational measures, applied by Regional Courts of Childhood and Adolescent for offenders teens. The purpose of this study is to describe and analyse the management of FASE-RS, focusing on the fundamental rights of adolescents deprived of liberty and the governmental responsibility of implement, public policies national and State between 2002 to 2014.

**Methodology & Theoretical Orientation:** Is a qualitative study of organizational-historical exploration using content analysis, interview techniques, analysis of documents and participant observation. As research tool we will use semi-structured interviews with open issues applied in specific social representations: Presidents (managers), judges and prosecutors from childhood.

**Findings:** The current population is around 1367 teenagers, between 12 and 21 years old, fulfilling educational measures in juvenile justice institution. The State shall ensure, with full protection and absolute priority, for all the teenagers, deprived of liberty, the right to life, health, food, education, leisure, professional training, culture, dignity, respect, freedom, family and community living, besides putting them safe from all forms of negligence, discrimination, exploitation, violence, cruelty and oppression (ECA-1990).

**Conclusion & Significance:** The Government plans do not include in his re-socialization priorities of adolescents deprived of freedom, in disagreement with the law. The final result will be included before October.

### Biography

Joelza M. A. Pires graduated since 1984 in Medicine from Federal University of Bahia (UFBA/1984) and a Master's Degree in Medical Sciences (Paediatrics) at the Federal University of Rio Grande do Sul (UFRGS/2003). She is completing the doctoral degree in the graduate program in child and adolescent health of UFRGS. She is a specialist in Paediatrics by the Brazilian Society of Paediatrics (SBP). She is a domestic violence expert at the University of Sao Paulo (USP). She is the President of the Foundation of Educational Service of Rio Grande do Sul (FASE/RS) for delinquency juvenile in the management 2011-2015. She has an experience in Social Paediatrics working mainly on the following themes: violence against children and adolescents, sexual abuse and exploitation of children and adolescents, families in situation of vulnerability and social risk, domestic violence, juvenile delinquency, restorative practices, non-violent communication and culture of peace, diabetes and mortality etc.

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# EPIDEMIOLOGY & PUBLIC HEALTH

October 23-25, 2017 | Paris, France

## SOCIOECONOMIC DEPRIVATION AND SURVIVAL IN OLDER ADULTS WITH ANGINA: A COMMUNITY-BASED COHORT STUDY IN CHINA

**Weiju Zhou<sup>a</sup>, Alex Hopkins and Ruoling Chen**<sup>a</sup>University of Wolverhampton, UK

**Background:** Over the past 30 years, China has had an increasing number of people with angina alongside a rapid economic development and population aging. China has also seen an increase in the income gap between rich and poor. The association between socioeconomic deprivation (SED) and survival of older adults with angina is unclear.

**Methods:** In 2001-2003, we interviewed 1457 people aged  $\geq 60$  years who had minimal educational levels in Anhui province, China, having characterised socio-demographics and risk factors for cardiovascular disease and documented doctor-diagnosed angina at baseline. One year after baseline, survivors were re-interviewed to document incident angina. The vital status of all cohort members was followed up over five years. A Cox regression model was used to calculate hazards ratio (HR) of mortality in relation to SED.

**Results:** 131 participants with angina at baseline or at one-year follow up had an increased mortality (23.7%) compared to those without angina (mortality 14.2%). The multivariate adjusted HR in angina patients living in rural areas versus non-angina participants living in urban areas was 8.45 (95%CI 1.93-37.0). Multivariate adjusted HR among angina patients having a low level of education, occupational class or income versus non-angina participants having high levels was 2.41 (1.38-4.22), 2.15 (1.11-4.17) and 2.88 (1.40-5.92) respectively. Within angina patients, an increased HR was significantly observed for patients living in rural versus urban (4.99, 1.09-22.9), but not in those with other indicators of SED.

**Conclusions:** In China, reducing surviving inequality in older adults with angina should be addressed in rural areas.

### Biography

Weiju Zhou is a PhD student in Epidemiology and Global Health Research under the supervisions of Drs Alex Hopkins and Ruoling Chen (DoS) at the University of Wolverhampton (UoW), UK. On obtaining his first-class BSc from UoW in June 2016, Weiju started his PhD study. His research interesting areas cover Coronary Heart Disease and Health Inequality. Weiju examines the data of a large cohort of Chinese older adults to address important research questions from the PhD proposal. He has co-authored a paper published in peer-reviewed journal. Mr Zhou is President of the Wolverhampton Chinese Students and Scholars Association, UK.

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# EPIDEMIOLOGY & PUBLIC HEALTH

October 23-25, 2017 | Paris, France

## THE INDIGENOUS AUSTRALIAN MALNUTRITION PROJECT: MEASURING THE BURDEN AND NATURE OF MALNUTRITION IN REGIONAL AUSTRALIAN HOSPITALS

**Natasha F Morris<sup>a,b</sup>, Simon Stewart<sup>c</sup>, Malcolm Riley<sup>d</sup> and Graeme P Maguire<sup>a</sup>**<sup>a</sup>Baker Heart and Diabetes Institute, Australia<sup>b</sup>Monash University, university in Melbourne, Australia<sup>c</sup>Mary MacKillop Institute for Health Research, Australia<sup>d</sup>CSIRO Health and Biosecurity, Australia

**Statement of the Problem:** Worldwide, many indigenous populations experience poor health due to their vulnerability to socio-economic disadvantage. Indigenous people are more likely than non-indigenous people to have nutrition related diseases, increased morbidity and decreased life expectancy. Malnutrition in hospital patients is a well-recognized problem; however, malnutrition is frequently under recognized or under estimated in vulnerable patients including indigenous people.

**Purpose:** The purpose of this study was to measure the burden and nature of malnutrition in adult indigenous Australian inpatients in 3 regional hospitals.

**Methodology & Theoretical Orientation:** A cross-sectional survey was used to measure malnutrition risk using the Malnutrition Screening Tool and Australian Nutrition Tool; and malnutrition using the Subjective Global Assessment. A Population Based Screening Framework was used with the aim of increasing the awareness and recognition of malnutrition in indigenous Australians and to facilitate early nutrition management.

**Findings:** 608 indigenous and non-indigenous Australians were enrolled in this study. The prevalence of malnutrition in all patients was 46.1% (95% CI 40.1-52.3%). Higher rates of malnutrition were observed in indigenous Australians residing in Central Australia (56.7%, 95% CI 46.7-66.4%) than in the Top End of Australia (40.7%, 95% CI 31.7-50.1%) and Far North Queensland (36.7%, 95% CI 36.7%, 95% CI 23.4-41.7%). Factors independently associated with malnutrition for Indigenous Australians included Central Australian residence and an increased Charles Comorbidity Index. Anthropometric variables including a BMI <18.5 kg/m<sup>2</sup> and smaller mid-upper arm circumference were strong predictors of malnutrition for Indigenous Australians.

**Conclusion & Significance:** This is the first study to measure the burden and nature of malnutrition in indigenous Australians in an inpatient setting. We observed higher rates of malnutrition than previous malnutrition surveys in Australia and the differing nature of malnutrition that we found highlights the need to developing alternative approaches to malnutrition screening and detection in indigenous Australians.

### Biography

Natasha F Morris is a PhD Candidate at Baker Heart and Diabetes Institute and Monash University. Her expertise lies in malnutrition screening and aims to improve malnutrition screening and the nutritional health of adult patients. She is keen on completion of her PhD work involving improving the nutritional health for people with chronic disease through early assessment and nutritional intervention. She is a Lecturer at the University of Melbourne, Department of Nursing, and Coordinates Graduate Certificate in Nursing Practice.

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## Scientific Tracks & Abstracts Day 3

Epidemiology 2017

## Sessions:

Day 3 October 25, 2017

**Epidemiology and Antibiotic Resistance | Infectious Disease | Congenital Heart Disease |  
Disease Control | Etiology**

### Session Introduction

**Title: Spatiotemporal clustering of cutaneous leishmaniasis in Fars province, Iran**

**Marjan Zare** | Shiraz University of Medical Sciences | Iran

**Title: International cancer survival gaps and the influence of health systems performance**

**Phyu Sin Aye** | Open University | UK

**Title: Space-time cluster analysis of malaria in Fars province, Iran**

**Marjan Zare** | Shiraz University of Medical Sciences | Iran

6<sup>th</sup> International Conference on

# EPIDEMIOLOGY & PUBLIC HEALTH

October 23-25, 2017 | Paris, France

## SPATIOTEMPORAL CLUSTERING OF CUTANEOUS LEISHMANIASIS IN FARS PROVINCE, IRAN

**Marjan Zare<sup>a</sup>, Abbas Rezaianzadeh<sup>a</sup>, Hamidreza Tabatabaee<sup>a</sup>, Mohsen Aliakbarpour<sup>a</sup>, Hossein Framarzi<sup>a</sup> and Mostafa Ebrahimi<sup>a</sup>**<sup>a</sup>Shiraz University of Medical Sciences, Iran

**Background:** Cutaneous Leishmaniasis (CL) is an infectious endemic disease in most provinces of Iran, which is among public health problems. CL is prevalent in 88 countries in the world, infecting nearly 12 million individuals. Almost two million new leishmaniasis cases occur yearly, with CL accounting for 1500000 cases. Fars province is known to be an endemic area for CL.

**Study objective:** The objective of this study is to assess the spatiotemporal trait of CL in Fars province, Iran.

**Materials & Methods:** Spatiotemporal cluster analysis was done retrospectively to find spatiotemporal clusters of CL cases. Time-series data were recorded from 29201 cases in Fars province, Iran from 2010 to 2015, which were used to verify if the cases were distributed randomly over time and place. Then, subgroup analysis was applied to find significant sub-clusters within large clusters. Spatiotemporal permutation scans statistics in addition to subgroup analysis were implemented using SaTScan software.

**Results:** This study resulted in statistically significant spatiotemporal clusters of CL ( $p < 0.05$ ). The most likely cluster contained 350 cases from 1 July 2010 to 30 November 2010. Besides, 5 secondary clusters were detected in different periods of time. Finally, statistically significant sub-clusters were found within the three large clusters ( $p < 0.05$ ).

**Conclusion:** Transmission of CL followed spatiotemporal pattern in Fars province, Iran. This can have an important effect on future studies on prediction and prevention of CL.

### Biography

Marjan Zare pursued MS in Biostatistics and is a PhD student in Epidemiology. She has expertise in statistical and epidemiological modelling, and has passion in improving health care and public health policies. She has been working for Shiraz Medical School research center for three years and she knows how to work with R, ITSM, CMA, Lisrel, Arc GIS, SaTScan, SPSS, Python language softwares to do ordinary statistical analysis. Also, she is interested in doing micro array analysis using Mega Data in field of genetics; hereby she knows how to work with the related softwares like Plink and Haploview. The basis of this research is to predict the potential outbreaks in the future using Time-Series data.

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### Notes:

6<sup>th</sup> International Conference on

# EPIDEMIOLOGY & PUBLIC HEALTH

October 23-25, 2017 | Paris, France

## INTERNATIONAL CANCER SURVIVAL GAPS AND THE INFLUENCE OF HEALTH SYSTEMS PERFORMANCE

**Phyu Sin Aye\***

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**Background:** The recent CONCORD-2 international cancer survival study<sup>1</sup> showed that the disparity in cancer survival outcomes among countries remained substantial. Cancer survival, a measure of survival of a patient from the time of diagnosis of cancer to a given time such as 1 year, 5 years and so on, is a key measure to reflect health care services for diagnosis and treatment of cancer. This study aims to address the international cancer survival gaps and indicate the components of health systems performance which may be improved effectively to bring down those gaps.

**Methods:** This study uses publicly available secondary data: survival data of 10 major cancers for 67 countries available from CONCORD-2 study and the health systems performance indicators for various countries available from published academic papers, health statistics of OECD and WHO, and official Ministry of Health websites. The z-test is used to address the international cancer survival gaps and multivariable regression is performed to understand the effects of health systems performance indicators and other influencing factors on cancer survival outcomes.

**Findings & Discussion:** There are statistically significant differences in cancer survival across the world, ranging from 3.4% difference in colon cancer survival to as high as 61.9% difference in rectal cancer survival when one country is compared to the country with a highest global level for each cancer. These values of cancer survival gaps represent room for improvement for each country to match up with the highest level. This study is proceeding to multivariable analysis of cancer data and health systems performance indicators to seek the areas of health systems performance that work best in improving the cancer outcomes.

### Biography

Phyu Sin Aye earned her medical degree from the University of Medicine, Myanmar. She worked at the Department of Medical Research for three years involving in various population-based researches. Her interests are epidemiology, biostatistics, chronic diseases, and health care services. She went on to complete her Master of Public Health at the University of Auckland, New Zealand, with a focus on cancer epidemiology and health services. She is currently a Ph.D. student at the Open University, UK and continues her research on international cancer survival gaps and the association with health systems performance in seeking to improve cancer outcomes.

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# EPIDEMIOLOGY & PUBLIC HEALTH

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## SPACE-TIME CLUSTER ANALYSIS OF MALARIA IN FARS PROVINCE, IRAN

Marjan Zare<sup>a</sup>, Abbas Rezaianzadeh<sup>a</sup>, Hamidreza Tabatabaee<sup>a</sup>, Mohsen Aliakbarpour<sup>a</sup>, Hossein Framarzi<sup>a</sup> and Mostafa Ebrahimi<sup>a</sup><sup>a</sup>Shiraz University of Medical Sciences, Iran

**Background:** Malaria is a human infectious disease transmitted by protozoan parasites from plasmodium family, which is prevalent in tropical and semi-tropical zones. This disease is important due to high frequency and severe lethality. Malaria is distributed from Sub-Saharan Africa, Asia, to Latin America. Totally, 214 million malaria cases were seen in 2015 universally ending up in 4,34,000 deaths, 90% of which occurred in Africa. Iran is a potentially suitable endemic site for malaria, with the incidence rate of 10-100 cases per 1,00,000 inhabitants. Indeed, almost 90% of cases are detected in southern parts of the country.

**Study Objective:** The objective of this research is to detect space-time clusters of malaria in Fars province, Iran.

**Materials & Methods:** Using time-series data including 357 malaria cases recorded during 1/1/2011 to 31/12/2015 in Fars province, space-time cluster analysis was done retrospectively to testify if the cases were distributed randomly over time and space. Thereafter, subgroup analysis was done to detect significant clusters within clusters. Space-time permutation model using scan statistics was employed using SaTScan software.

**Results:** The results indicated statistically significant space-time clusters of malaria ( $p < 0.05$ ). The most likely cluster included 6 cases from 1/7/2015 to 31/7/2015. However, no significant sub-clusters were observed within clusters in the study ( $p > 0.05$ ).

**Conclusion:** Malaria could have a space-time feature in Fars province, Iran. This can have an important effect on future studies on malaria prevention and prediction.

### Biography

Marjan Zare pursued MS in Biostatistics and is a PhD student in Epidemiology. He has expertise in statistical and epidemiological modelling, and has passion in improving health care and public health policies. She has been working for Shiraz Medical School research centre for three years and she knows how to work with R, ITSM, CMA, Lisrel, Arc GIS, SaTScan, SPSS, Python language softwares to do ordinary statistical analysis. Also, she is interested in doing micro array analysis using Mega Data in field of genetics; hereby she knows how to work with the related softwares like Plink and Hoploview. The basis of this research is to predict the potential outbreaks in the future using Time-Series data.

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