

Book of Abstracts  
The 3<sup>rd</sup> International Conference on Public Health  
(ICOPH 2017)

27<sup>th</sup>, 28<sup>th</sup> & 29<sup>th</sup> July 2017

Kuala Lumpur, Malaysia

Committee of the ICOPH - 2017

The International Institute of Knowledge Management (TIKM)

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Edited by Prof. Dr. Hematram Yadav and Prof. Dr. Rusli Bin Nordin

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## MESSAGE FROM THE CO-HOSTING PARTNER ICOPH 2017



On behalf of Taylor's University, it is an honour to welcome delegates to the 3<sup>rd</sup> International Conference on Public Health (ICOPH) with the theme, "Strengthening the Public Health Infrastructure towards Healthy Communities". A role in public health is vital for increasing life expectancy, however, it is rarely thought of until a crisis catches our attention.

Over the years, health initiatives and management for global communities are increasingly recognised as an important component for the overall wellness of human beings. Public health is constantly evolving in response to the needs of the population around the world. Initiatives like clean air, water policies and vaccinations keep people healthy and safe by preventing injury and disease.

Hospital based treatment may be more apparent to many; community based health initiatives need to be given more emphasis to increase the awareness of the health professionals, and also the public of their valuable role in a healthy population. It is necessary to remove various cultural, social and logistical barriers to enhance knowledge about healthcare needs, closing the gap in health disparities within countries.

At Taylor's University, we emphasise the advancement of knowledge through research and are happy to contribute to its dissemination through scientific conferences. More importantly, research outcomes should lead to action and guide programme development, followed by the delivery of health services. In line with the new strategic plan, we look to increase our capacity and affinity in the area of research and building commercial success, and to be recognised as the leading international university ranked in the top 100 universities in Asia by year 2022.

I sincerely hope the 3<sup>rd</sup> ICOPH 2017 will facilitate the exchange of research findings, opinions and views on issues related to Public Health among healthcare professionals and



academicians from different parts of the world and different health care systems. May the participants today gain valuable experience and put into good use what is learnt.

Prof. Michael Driscoll

Vice Chancellor & President Taylor's University

Malaysia

## MESSAGE FROM CONFERENCE CO-CHAIR- ICOPH 2017



It gives me great pleasure to welcome all of you to this 3<sup>rd</sup> International Conference on Public Health in Kuala Lumpur, Malaysia. This is the 3<sup>rd</sup> time this conference is being organised by TIIKM and the theme of the conference is ‘Strengthening the public health infra-structure towards healthy communities.’ First of all let me thank you all for attending this conference and secondly I would like to thank all the local academic partners and all universities and in particular the Ministry of Health Malaysia for providing support for the conference. Globally public health is no longer dominated by infectious diseases instead it is being dominated by chronic diseases such as heart disease, diabetes, cancer, and mental-health conditions, which require continuous treatment although polio and HIV are still with us. At the same time, newly emerging diseases such as Zika and Ebola epidemics are making headlines and these pose challenges to global health security in the future.

Also war, civil unrest, and acts of terrorism can hinder progress in all aspects of global development, including health, education, and gender equality. Extreme weather and rising sea levels, temperatures, and carbon dioxide levels could usher in a wide variety of human health effects. We as public health professionals need to address some of these issues and influence our policy makers to act. It is important to consider how our actions today will be viewed by our future generations’ decades from now.

This year we have received about 600 abstracts for the conference and we are happy of the tremendous response we have received. I am sure that you all will deliberate on some of these important issues in the next few days. Finally let me take this opportunity to thank all the plenary speakers and also the members of the organising committee for the excellent preparations and arrangements for this conference and you the participants who have made

this conference happen. Hope you all will have good conference for the next few days and also enjoy the beauty of Kuala Lumpur and Malaysia

Thank You

Prof. Dr. Hematram Yadav

Department of Community Medicine

MAHSA University

Kuala Lumpur

Malaysia

## MESSAGE FROM CONFERENCE CO-CHAIR- ICOPH 2017



A very warm welcome (*selamat datang*) to all speakers and delegates to Kuala Lumpur, Malaysia and to our Third International Conference on Public Health 2017 (ICOPH 2017), 27-29 July 2017, organized by The International Institute of Knowledge Management (TIKM). The third conference follows on the highly successful first and second conference in 2015 and 2016, respectively, in Colombo, Sri Lanka. The theme of the first conference was “promoting global health through equitable access to health system” that took cognizance of new advances and research results in the areas of global health and health systems. The theme of the second conference was "bridging the gap between research and policy and creating a global platform to discuss evidence based health policies and interventions in public health.” In the third conference, we will address the very important and pertinent issue of **"Strengthening the Public Health Infrastructure towards Healthy Communities."**

The Sustainable Development Goals (SDGs), officially known as “Transforming Our World: the 2030 Agenda for Sustainable Development” is a set of 17 "Global Goals" with 169 targets that was officially sanctioned by the United Nations on 25-27 September 2015 as a successor to the Millennium Development Goals (MDGs). The SDGs build on the principles agreed upon under a United Nation resolution, popularly known as The Future We Want. It is a non-binding document released following the Rio+20 Conference in 2012 in Rio de Janeiro, Brazil.

The 17 global goals are: (1) No Poverty; (2) Zero Hunger; (3) Good Health and Wellbeing; (4) Quality Education; (5) Gender Equality; (6) Clean Water and Sanitation; (7) Affordable and Clean Energy; (8) Decent Work and Economic Growth; (9) Industry, Innovation and Infrastructure; (10) Reduced Inequality; (11) Sustainable Cities and Communities; (12)

Responsible Consumption and Production; (13) Climate Action; (14) Life Below Water; (15) Life on Land; (16) Peace, Justice and Strong Institutions; and (17) Partnerships for the Goals. Indeed, the ICOPH 2017 theme of "Strengthening the Public Health Infrastructure towards Healthy Communities" certainly echoes with most of the 17 SDGs.

Implementation of the SDGs has already started worldwide. It is no easy task, however. In each country, the goals must be translated into national legislation. Poor countries need the support of rich countries, and coordination at the international level is crucial. The SDGs is very ambitious, and there are many obstacles. It would be a great opportunity for ICOPH 2017 to deliberate on some of these obstacles and pave the way ahead.

I would like to take this opportunity to thank all speakers and delegates for making time and effort to attend and actively participate in this international conference. A very sincere thanks to the Organizing Committee and Scientific Committee members for all the help and all sponsors and participating organizations for supporting the conference. I hope that the conference will forge new alliances in research, development and training that will be beneficial to us all.

Sincerely,

A handwritten signature in black ink, appearing to read 'Rusli Nordin', with a horizontal line underneath.

Prof. Dr. Rusli Bin Nordin

Professor of Public Health Medicine (Occupational Health)

Jeffrey Cheah School of Medicine and Health Sciences

Monash University Malaysia

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*David C. Bellinger*

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*R Nordin, A.M Qureshi, M.S.M Yasin, P Kumar, J Singh, S.M.A.S Junid, M.A.A Mohammed and K.I Ismail*

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# KEYNOTE SPEECH





## **THE HEALTH BURDEN ASSOCIATED WITH CHILDREN'S EXPOSURES TO NEUROTOXIC ENVIRONMENTAL CHEMICALS**

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### ***ABSTARCT***

Children throughout the world are exposed to environmental chemicals that are known to be neurotoxic. The health costs associated with these exposures are especially large in low- and middle-income countries. Children are generally more vulnerable to these harms than adults are due to toxicokinetic and behavioral differences. For some chemicals, exposures begin in the womb and affect virtually every individual. Among the chemicals about which the most is known are inorganic lead, methylmercury, organophosphate pesticides, and arsenic. Chemicals of emerging concern include the bisphenols, the brominated flame retardants, phthalates, air pollution, and fluoride. Many of these chemicals can perturb endocrine function, affecting long-term health outcomes. Two examples will be discussed in detail to illustrate different aspects of the societal costs associated with children's exposures to chemicals: the country-specific health burden associated with intellectual disability due to prenatal exposure to methylmercury, and the population effects of intellectual loss due to childhood lead exposure.



# PLENARY SPEECHES



## TRANSITION IN MEDICAL EDUCATION: GLOBALIZATION IN HEALTH CARE

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### ABSTRACT

All doctors experience transition during their training and also subsequent careers. These changes include change in status and seniority, changes in geographical location change in specialty, change from houseman to medical officer etc. Several factors are responsible for the changes in medical education which include the scientific revolution, population growth, demographic shifts in patient population and globalization. Medical schools flourished in USA during the late 19<sup>th</sup> century to early 20<sup>th</sup> century and the quality of education was being questioned. In 1908, AMA commissioned Carnegie Foundation to evaluate medical education in US. Abraham Flexner examined the physicians' workforce and the number and quality of medical graduates. His report in 1910 entitled "Medical Education in the United States and Canada", gave rise to modern medical education in United States. This was known as Flexner report to improve the quality of medical education out of 155 schools 89 (57%) of the schools were closed down. The report outlined minimum standards of education and introduced the 4 year programme. It also recommended regulation of the medical profession by state government and proposed medical schools appoint full-time clinical professors who will be barred from all but charity practice, in the interest of teaching. Similarly the British Medical Association introduced the concept of tomorrow doctors which outlined the outcome of graduates and the standards for the delivery teaching, learning and assessment. In line with all these changes pedagogical transition in medical education took place and introduced problem based learning (PBL) and CBL, and other novel methods such as OSCE, simulators and computers, webinars, and lecture casting. Further the report of The Robert Wood Johnson Commission on Medical Education: The Sciences of Medical Practice' gave the following comments:

- Since the beginning of the 1980s, criticism of medical education in the United States has increased.
- Basic sciences are often taught with no connection to clinical practice and with little connection among the basic sciences.
- Social and behavioral sciences, and the newer disciplines of clinical epidemiology and information sciences, may not be taught at all or only in a token manner.
- Criticism of the current curriculum has been increasing, and at least 11 national commissions in the past 40 years have made observations like "Medical education has kept only fitful pace with changes in biomedical science and health care needs."

With the globalization there is an increase in the flow of people products, services and information between and countries are having a dramatic influence on the worlds' health and health care deliver. Physicians are now expected to have broader understanding of various alternatives and culturally determined medical practice. Education for global health in medical schools and Medical schools in US have engaged in international rotations in developing countries for half a century. Benefits of international clinical rotation include increased skills and confidence, enhanced sensitivities to cost issues. In conclusion the modern doctor must have the understanding of the languages, cultures, and

practical arrangements of the world beyond the geographical boundaries of his/her local region and this is important because of the Globalization of health care and it is important that medical schools introduce Global Health as part of their curriculum.

**PREVALENCE AND DETERMINANTS OF COMMUTING ACCIDENTS AMONG  
SOCSO REGISTERED WORKERS IN MALAYSIA: DEVELOPING,  
IMPLEMENTING AND EVALUATING A COST-EFFECTIVE INTERVENTION  
PROGRAM TO IMPROVE KNOWLEDGE, ATTITUDE, AND PRACTICE TO  
PREVENT COMMUTING ACCIDENTS**

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**ABSTRACT**

**PROBLEM STATEMENT:** Commuting accident is rapidly becoming an important global and national issue due to its adverse impact on health, safety and productivity of workers, employers, family, and the rising costs of social security. Various factors—environmental, motor vehicular, health status and socio-behavioral—have been implicated as contributing directly or indirectly to the rising trend in commuting accident statistics. Recent studies have focused on the socio-behavioral elements as being the key determinants of commuting accidents. In this context, we are especially interested in examining whether these socio-behavioral factors could explain the major variance of commuting accidents. We would like to determine whether a comprehensive Commuting Accident Intervention Program (CAIP) could improve the knowledge of, create proper attitude towards, and develop safe driving practices to prevent commuting accidents. From the perspective of the Social Security Organization (SOCO), we are also interested in examining the cost-effectiveness of CAIP in the prevention of commuting accidents. **OBJECTIVES:** (1) To determine the prevalence and associated risk factors of commuting accidents among SOCO registered workers in Malaysia; (2) To identify the determinants of commuting accidents among SOCO registered workers in Malaysia; (3) To develop, implement and evaluate the effectiveness of a CAIP to improve the knowledge, attitude and practice to prevent commuting accidents among SOCO registered workers in Malaysia; and (4) To evaluate the cost-effectiveness of CAIP in the prevention of commuting accidents. **HYPOTHESES:** (1) The CAIP is effective in improving the KAP to prevent commuting accidents; and (2) The CAIP is cost-effective in the prevention of commuting accidents. **RESEARCH METHODOLOGY:** Study Design: Phase I (2017): A cross sectional study to determine the prevalence and associated risk factors of commuting accidents among SOCO registered workers will

be undertaken. Workers currently registered with SOCSO will be recruited using proportionate cluster sampling to complete the commuting accident questionnaire. SOCSO will assist in improving the response rate by engaging industries to cooperate in this study. Phase II (2018): A cluster randomized controlled trial (RCT) to determine the effectiveness of CAIP in improving the knowledge, attitude, and practice towards preventing commuting accidents. The unit of randomization is the cluster and all workers in the cluster will be assigned to either the intervention or control group. Sample size estimation will consider the “design effect” by doubling the required sample sizes. Randomization: A cluster randomization approach will be adopted. Clusters of workplaces registered with SOCSO will be identified and randomized into experimental and control groups. The experimental group will undergo a comprehensive CAIP Workshop training whilst the control group will be given pamphlets as reading materials. Phase III (2019): A case-mix modeling of the cost-effectiveness analyses of the CAIP will be undertaken. Research Instruments: The research instruments consist of the following: (1) Questionnaire to measure the socio-demographic characteristics and KAP of commuting accidents; (2) Health Profile of respondents; (3) Mental Health Questionnaire (DASS-21); (4) CAIP package consisting of (a) Videos on commuting accidents; (b) Posters and pamphlets on commuting accidents; (c) PowerPoint presentation on commuting accidents including preventive measures such as safe and defensive riding and driving and Q&A; and (d) Case-mix modeling worksheet. Measurement: (1) Univariate and bivariate analyses for the prevalence and associated risk factors (socio-demography, health, and mental status) of commuting accidents; (2) Mixed-mode repeated measure ANOVA to determine the effectiveness of the intervention (CAIP) versus control; (3) Cost-effectiveness analyses of the CAIP using the case-mix model. **EXPECTED OUTPUT/OUTCOMES/IMPLICATION:** (1) The prevalence and associated risk

factors of commuting accidents among SOCSO registered workers and industries; (2) Effectiveness of CAIP in improving the KAP of workers towards preventing commuting accidents; and (3) Cost-effectiveness of the CAIP in preventing commuting accidents. **SIGNIFICANCE OF OUTPUT FROM THE RESEARCH PROJECT:** (1) This research project will provide the latest national prevalence and associated risk factors of commuting accidents among SOCSO registered workers and industries; (2) If the CAIP is cost-effective in the prevention and reduction of commuting accidents, the program can be further developed into a national Commuting Accident Prevention Program (CAPP) that can be used by all industries as part of their continuing effort to prevent and reduce the prevalence of commuting accidents, thereby increasing productivity and reducing the costs of SOCSO insurance claim, cost of treatment, rehabilitation, and return-to-work (RTW) program. From the perspective of SOCSO, this research project will help provide the necessary data to appraise the latest trend in commuting accidents, identify the risk factors that can be mitigated, and the cost of running a national CAPP, and the savings from reduced commuting accident rates and health insurance claims.

**Keywords:** SOCSO Registered Workers, Commuting Accidents, Prevalence, Risk Factors, Cluster Randomized Clinical Trial



# ORAL PRESENTATIONS



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**WORK-RELATED ILLNESSES OF RICE FARMERS IN MAE YAO SUB-DISTRICT, MEUANG DISTRICT, CHIANG RAI PROVINCE**

L Nichapat

*Chiang Rai Rajabhat University, Thailand***ABSTRACT**

Almost 40 percent of Thai agriculture were rice farmers which are classified as informal labors and have no social welfare protection. This research aimed to study work-related illnesses and injuries of the farmers and the participation of these farmers in the organization of health promotion and occupational disease prevention in Mae Yao Sub-district. Research population was 1,610 farmers. The stratified random sampling method was conducted to obtain data from 320 samples in 7 villages. Information was collected through the questionnaire with both close-ended and open-ended questions. The quantitative and qualitative data were then analyzed by descriptive statistics and content analysis, respectively. The findings are as follows:

Causes of work-related illnesses of the farmers were divided into 4 aspects: physical, chemical, biological and ergonomic aspects. It was illustrated that ergonomic hazards were the most, especially, musculoskeletal disorders including the shoulder, forearm, hand and wrist pain (82.5%). Regarding work-related injuries showed that they ever been injured (35.9%). The parts of body injured included feet (20.1%) fingers. The participation of farmers in health promotion and prevention projects conducted by the organization involves has not seen clearly and continuously. Although, some project was not really intended for the farmers directly. And, at the same time, it can be considered as the initial participation. More importantly, information can be used as a guideline to promote health, prevent occupational disease and reduce the risk from work of the farmers in the future.

**Keywords:** Work-Related Illnesses, Work-Related Injury, Rice Farmers, Occupation Health, Participation

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**PATTERNS OF SEAT BELT USE AMONG FRONT SEAT OCCUPANTS;  
KHARTOUM STATE, SUDAN FROM AUGUST TO NOVEMBER 2015**

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**ABSTRACT**

This study was conducted to determine the magnitude of seat belt use among front seat occupants, and provide a better understanding of factors underlying this behaviour. In order to estimate the prevalence of seat belt use among front seat occupants, 10 observations sites were selected using multistage sampling technique. Then 800 drivers were interviewed at 39 sites for; seat belt use behavior, demographic variables, and attitudes towards seat belt use. Binomial and multinomial logistic models were used to study the contribution of demographical and attitudinal factors to self-reported use. Observed seat belt wearing estimates for drivers was 25% and 0.9% for front seat passengers. A significant independent contribution to seat belt use by demographical factors (gender, age, education, marital status and car type) was found among both consistent and inconsistent users. Regarding contributing beliefs and attitudes; the major contributors for use among users was avoidance of injury, while for the inconsistent users, it was driving long /high speed and avoidance of traffic police ticket/delay. Seat belt being uncomfortable was the main contributor for non-use among both inconsistent and non-users. While, 75% of drivers expressed their support for enforcing seat belt laws on front seat passengers. Conclusions and Recommendations: Seat belt use among front seat occupants in Khartoum is comparatively low. Discomfort from seat belt use was the major contributor to non-use. While, the presence of traffic police check points seems to increasing seat belt use among inconsistent users

Keywords: Seat Belt Use, Front Seat, Prevalence, Attitude, Behaviour, Khartoum

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**IDENTIFYING CHALLENGES IN TUBERCULOSIS TREATMENT ADHERENCE  
AND CROSS-BORDER REFERRAL AMONG MIGRANT WORKERS IN THE  
MINING SECTOR IN SOUTHERN AFRICA**

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**ABSTRACT**

South Africa is home to migrant mineworkers from neighboring countries. However, TB incidence in this population is quite high - estimated at 2500-3000/100 000 people. Furthermore, mineworkers who are diagnosed with TB are at risk for TB treatment non-adherence and lost-to-follow-up when returning to labor-sending areas. We conducted an elicitation study in South Africa to understand barriers to and potential promoters of TB treatment adherence and cross-border referrals among mineworkers in two large mines which employ large numbers of migrant mineworkers from the region. Data was collected using four methods: a) a scoping review of the literature, b) focus group discussions (FGDs) and an online survey with key stakeholders, c) FGDs with mineworkers who had TB and had travelled home while on treatment, and d) FGDs and a comprehensive survey with mineworkers who were on TB treatment at the time of the study. The study revealed many areas of convergence across the different data sources. Individual-level barriers to treatment adherence and care included belief in superiority of home country TB regimens, quality of life whilst on treatment, traditional beliefs regarding illness, lack of information about TB treatment, stigma, and alcohol use. Some structural/systemic barriers included disempowered/top-down care, lack of access to services and poor infrastructure in home countries, South African immigration laws, poor referral chains, lack of family support and staff attitudes and availability. Themes that emerged around possible promoters of adherence and referral included the promotion of harmonized treatment, patient psychosocial support, more thorough health education for patients and staff, and a well-coordinated and closely monitored cross-border referral system. The findings from this study presented an opportunity for developing multi-pronged, evidence-based intervention packages to address the problem of TB treatment non-adherence and ineffective cross-border referral mechanisms.

**Keywords:** Mineworkers, TB, Southern Africa, Adherence, Barriers, Promoters

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## DETERMINING SAFE DURATION OF TOLUENE EXPOSURE TOWARD FOOTWEAR WORKERS

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### **ABSTRACT**

The growth of informal industry of footwear is not supported by an adequate system of the workers' protection. Indeed a chemical substance, such as toluene, has a high risk of danger causing damage to major organ. The objectives of this research are to determine the intake of toluene in workers' bodies, to investigate the risk characteristics or the Risk Quotient (RQ) of toluene in workers' bodies, and to analyze the safe duration of toluene exposure against the footwear workers. The population in this study was 51 people and the sampling technique used was total sampling. The variables were the concentration of toluene and the risk levels of the workers' health. The data were collected by using interview sheets, questionnaires, and observation (checklists). The data were analyzed descriptively. The results show that 88.9% concentration of toluene is below the threshold value ( $<188 \text{ mg/m}^3$ ), the smallest value is  $0.8 \text{ mg/m}^3$  and the highest concentration is  $522.3 \text{ mg/m}^3$ ; the risk exposure levels in the work site-1 ( $\text{RQ} = 11.03$ ), work site-2 ( $\text{RQ} = 1.04$ ), work site-3 ( $\text{RQ} = 2.52$ ), work site-4 ( $\text{RQ} = 1.92$ ) are in unsafe conditions toward the exposure whereas the risk levels of the exposure in work sites 5, 6, 7 and 8 are still in a safe condition ( $\text{RQ} < 1$ ). Concentrations of the toluene exposure in most work sites are below the threshold. Most of the workers have RQ value  $< 1$  that the toxicity of pollutants has not yet shown the risky impact toward the workers.

Keywords: Toluene, Intake, RQ, Safe Duration

A5

[05]

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**THE RELATED FACTORS WITH CHOLINESTERASE LEVEL OF BLOOD PALM FARMERS AS RESULT OF PESTICIDES EXPOSURE IN PETAJEN VILLAGE**

Herdianti

*Public Health Program of Institute of Health Science Harapan Ibu Jambi, Indonesia***ABSTRACT**

Pesticides are toxic and hazardous materials, the negative impacts of pesticide poisoning can be found by checking blood cholinesterase activity. Based on the results of blood cholinesterase levels in the Petajen village at 2012 at 50 oil palm farmers to poisoning by 74% and by 2013 to 50 farmers being poisoned as much as 85%. The aim of this study was to determine the relationship of several factors on levels of cholinesterase in the blood of farmers palm. This study design with cross sectional design. The population is all oil palm farmers in the village Petajen Bajubang District of Batang Hari district as much as 207 souls with a sample amounted to 58 people. The sampling technique is by purposive sampling. The characteristic feature of the respondents, aged farmers most is ranging between 31-45 years as many as 28 people (48.3%), the average tenure of more than 10 years as many as 33 people (56.9%), education of farmers at most are graduates SD with the number of 24 people (41.4%). Statistical test results found no correlation between knowledge with pesticide poisoning with p-Value = 0.012, the use of Personal Protective Equipment with p-Value = 0.000 and spraying with the wind direction with p-Value = 0.002. The conclusion of this study is the oil palm farmers in the village Petajen poisoned by 62.1%.

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## ENVIRONMENTAL AND OCCUPATIONAL HEALTH IMPACT OF BUAXITE MINING IN MALAYSIA: A REVIEW

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### **ABSTRACT**

This review identifies environmental and occupational health impacts on miners and surrounding communities, with perspective of bauxite mining in Malaysia. Aluminium occurs in earth's crust in oxidized form, is found mainly as bauxite in tropical areas, including Malaysia. Extraction of one part aluminium requires 3 parts of bauxite. Effects of bauxite mining were searched through Google Scholar, British Medical Journal and Cochrane library, whereas environmental and occupational impacts were extracted from Ovid Medline and PubMed. Globally, Australia is largest producer while China is main consumer of bauxite. In 2014, Indonesia banned bauxite export to China, while Malaysia increased production under this demand. The related environmental issues include, air, water and soil pollution due to bauxite dust; its leaching into water sources results in reduced soil fertility, affecting agricultural produce and aquatic life, which ultimately affects human health as consumers. Bauxite's occupational exposure affects miners' health, and has negative implications on surrounding communities' health as increased respiratory symptoms (due to fine dust); and drinking water contamination. Other health risks of bauxite and heavy metals include noise-induced hearing loss, mental stress, skin and eye irritation. There is knowledge gap about chronic health impacts of bauxite mining which requires detailed research to mitigate such impacts. This review discusses bauxite components, including trace elements, its mining processes, and related impacts on environment and health of exposed workers and communities. Review also explores Malaysian legal requirements and occupational exposure standards of bauxite.

Keywords: Bauxite Exposure, Bauxite Mining, Occupational and Environmental Impact, Malaysia



**B1****[07]**

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**USAGE OF CHILD-HEALTH-DEVELOPMENTAL-RECORDS FOR ASSESSMENT  
OF DEVELOPMENTAL MILESTONES AMONG MOTHERS IN COLOMBO  
DISTRICT****F Fayaz***Post Graduate Institute of Medicine, University of Colombo, Colombo, Sri Lanka***ABSTARCT**

Child-Health-Development-Record (CHDR) is used mainly for immunization and growth-monitoring purposes, but only minimal emphasis is given for getting information and marking developmental-milestones. The objective was to assess the knowledge of developmental-milestones among mothers of eighteen-month-old children and to describe the reported-practices of child-development in the CHDR. A descriptive-cross-sectional study was conducted among 421 mothers and child-pair of 18 months. A pre-tested-interviewer-administered-questionnaire and a checklist were used to collect data. Data was analyzed using SPSS version 17 package. Total assessment of developmental-milestones was good among 73.9% of mothers out of 414 respondents. Only 2.7% (n=12) of them gained information regarding developmental-milestones from the CHDR. Nearly seventy percent of mothers marked for the assessment of vision at the first month (n=287) however only half of them marked (35.5%, n=147) at the age of one-year. Sixty percent of them assessed for hearing at few hours after birth (n=245) and 54.3% around one month (n=225) and by one-year assessment of hearing drastically dropped to 26.8% (n=111). Recording of vision, hearing and developmental-milestones by mothers in the CHDR was higher in initial months and falls dramatically with increasing age of the child. Assessment of vision and hearing in first few months and assessment of developmental-milestones from birth to 18 months were influenced by mother's-knowledge. Therefore mothers should be encouraged to utilize the CHDR for assessment of development-milestones and emphasis the importance of recording the milestones. This message should be given to them at each clinic visits and re-in forcing its importance.

**Keywords:** Child-Health-Development-Record, Developmental-Milestones, Mothers'-Knowledge, Reported-Practices, Eighteen-Month-Old

## ASSOCIATION BETWEEN BLOOD LEAD LEVELS AND BASOPHILIC STIPPLING ERYTHROCYTES IN CHILDREN

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### ABSTRACT

Lead is the heavy metals that pollute the air and lead exposure continues to be the most serious public health problem. Increased lead absorption causes negative effect such as increased number of basophilic stippling erythrocytes. Battery smelting industry is an important source of lead pollutants today. Cinangka is one village in Bogor District that has battery smelting. Based on the results of investigation by KPBB (Komite Penghapusan Bensin Bertimbang) in 2010, the mean of blood lead levels (BLL) in Cinangka children's was 36.6 µg/dl (WHO threshold = 10 µg/dl). Aim of this study was to analyze the effects of BLL on the basophilic stippling erythrocytes in children. This study used a cross-sectional design. Blood samples were taken from 103 children in Cinangka Village Bogor District, Indonesia (2014) to measure BLL and basophilic stippling erythrocytes. A questionnaire used to determine the data on the level of parent's education, parent's income and nutrient intake. A nutritional status was known by calculating the Body Mass Index. Overall, 103 children (43 boys and 60 girls) with mean±SD age of 11,27±1,03 years were studied. The mean BLL on children was 14,70 µg/dl, whereas the lowest BLL 0,05 µg/dl and the highest BLL 52,11 µg/dl. The results also showed 61.2% of children had high BLL ( $\geq 10$  µg/dl). Statistical analysis with chi square showed that the BLL ( $p = 0.001$ ) and mother's education level ( $p = 0.005$ ) had significant association with basophilic stippling. Based on multivariate analysis, BLL was the most dominant variables associated with basophilic stippling.

Keywords: Blood Lead Levels (BLL), Basophilic Stippling Erythrocytes, Children

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**INFANT AND YOUNG CHILD FEEDING**

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**ABSTRACT**

Optimal infant and young child feeding practices ranks high amongst the most effective interventions to improve child health. Breastmilk is considered the optimal source of nutrition during infancy which reduces the incidence of several chronic conditions. To explore the possible determinants of breastfeeding, 1484 mothers who had delivered in the past 12 months were interviewed at the vaccination centers across six governorates in Kuwait. The structured questionnaire comprised segments pertaining to sociodemographic, reproductive history, infant feeding and medical history and assessed factors that were both positively and negatively associated with duration of breastfeeding. In total, 98% mothers initiated breastfeeding at the hospital but by discharge only 73% were breastfeeding in any form and only 37% exclusively breastfeeding. By 3 months, 85.5% had ceased breastfeeding completely. Younger age of the mother, natural mode of delivery, skin to skin contact, mother's source of information and family support were positively associated with longer breastfeeding duration. Mother's knowledge and attitude towards breastfeeding had a great impact on her feeding choices with common misperceptions of not producing enough milk (21%) and the baby not sucking well (21%) reasons being cited for termination of breastfeeding. Worldwide where the prevalence of both obesity and T2DM is growing rapidly, the clinical and public health role of breastfeeding takes on even greater significance. The first two years of life provide a critical window of opportunity for ensuring children's appropriate growth and development. It is a public health responsibility to encourage and create awareness about the importance of breastfeeding.

**Keywords:** Breastfeeding, Mother, Duration, Nutrition, Practices

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## COMPLIANCE TO ESSENTIAL INTRAPARTUM AND NEWBORN CARE IN GOVERNMENT FACILITIES, BUKIDNON, PHILIPPINES

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### **ABSTRACT**

This study assessed the compliance of the government birthing facilities to Essential Intrapartum and Newborn Care (EINC) protocol in the Province of Bukidnon, Philippines. Forty-nine deliveries handled by 37 birth attendants were observed in 7 hospitals and eight lying-in birthing facilities. The level of awareness, training background and the compliance to time-bound interventions were described based on the assessment and observation using the standard EINC assessment tool. Participants were “Moderately Aware” regarding the Administrative Order (A.O.) No. 2009-0025, a sequence of four core steps in normal and caesarean section delivery, recommended and unnecessary interventions with an average mean of 3.67. Only twelve (12) out of 27 interventions were complied based on WHO standards. Consequently, training components contributed to the adoption of EINC when correlated with its compliance. However, only a few participants were trained. The level of awareness significantly influenced the compliance among some birth attendants. However, some aspects of compliance run counter to their awareness and training background that can be attributed to an old familiar behavior.

Keywords: Intrapartum Care, Newborn Care, Compliance

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## THE RELATIONSHIP BETWEEN THE FULL RANGE OF BIRTH WEIGHT AND CHILDHOOD WEIGHT STATUS: BY GESTATIONAL AGE

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### ABSTRACT

**OBJECTIVES:** To investigate the relationship between the full range of birth weight and childhood weight status stratified by gestational ages. **METHODS:** A national survey of 65,347 children aged 6-18 years was conducted in China in 2013. Weight and height were measured objectively. Epidemiologic data including age, gender, birth weight and gestational age were collected by questionnaires. Multivariable regression models were used to study the associations. **RESULTS:** In total, the prevalence of childhood underweight in the low, normal, and high birth weight group was 10.39%, 6.87%, and 4.06%. The corresponding prevalence of obesity was 8.88%, 10.85% and 16.89%, respectively. A positive association between birth weight and BMI z-scores was observed in the term, post term subgroup and overall population. Overall, low birth weight contributed to underweight: odds ratio (OR) 1.60, 95% confidence interval (CI) 1.23-2.10, but had no significant association with overweight or obesity after adjustments. High birth weight led to overweight (OR 1.19, 95%CI 1.06-1.34) and obesity (OR 1.51, 95%CI 1.34-1.70), and was negatively linked with childhood underweight (OR 0.57, 95%CI 0.46-0.71). Similar trends were observed in the term subgroup but not in the preterm or post term subgroups, except that high birth weight was positively associated with obesity in the post term group. **CONCLUSIONS:** Overall, low birth weight increased the risk of childhood underweight but did not seem to affect the risk of overweight or obesity. High birth weight was linked with increased overweight and obesity and decreased underweight in children. Similar trends were observed in the term subgroup.

**Keywords:** Birth Weight, Gestational Age, Childhood Obesity, Underweight

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## PARENTS' PERCEPTION OF CHILDHOOD OBESITY FOR DEVELOPMENT OF OBESITY PREVENTION PROGRAM: A REVIEW

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### **ABSTRACT**

The problem of obesity is a health issue that has been highlighted in public health. This is because cases are increasing every year in both children and adults. On the other hand, obesity is associated with an increased risk of some non-communicable diseases: heart disease, diabetes, and stroke. Increasing cases of the disease will increase health costs to be provided by the government through national health insurance. Therefore, there is a need for establishment of preventive measures against childhood obesity. One of the factors causing obesity is the community perception, especially parents, towards childhood obesity. Therefore, this paper reviews the role of parents' perception on the prevention of childhood obesity, based on qualitative data. Parents' perception can be related to diet and physical activity. Diet related perception consisted of child's gender; myths in the community; parental knowledge including definition of obesity, daily calorie intake, and healthy diet; parental health status (obese or not) and knowledge of snacks including portion and frequency. Adequacy of physical activity and its safety during outdoor activity determine parents' perception. Some of parents' perceptions are able to promote healthy diet and behaviors, but many of their perceptions can also be barriers to healthy diet and behaviour. Considering the important role of parents perception on the incidence of childhood obesity, incorporating family, school, and community in the obesity prevention program is essential, including parent education.

Keywords: Childhood Obesity, Parents' Perception, Healthy Diet, And Physical Activity

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**THE EFFECTIVENESS OF COMMUNITY HEALTH WORKER TRAINING  
PROGRAMS FOR CARDIOVASCULAR DISEASE MANAGEMENT IN LOW AND  
MIDDLE INCOME COUNTRIES – A SYSTEMATIC REVIEW**

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**ABSTRACT**

Community health workers (CHWs) are increasingly being tasked to prevent and manage cardiovascular disease (CVD) and its risk factors in underserved populations in low and middle income countries (LMIC); however, little is known about the required training necessary for them to accomplish their role. This review aimed to evaluate the training of CHWs for the prevention and management of CVD and its risk factors in LMIC. A search strategy was developed in line with PRISMA guidelines and 5 electronic databases (Medline, Global Health, ERIC, EMBASE and CINAHL) were searched to identify peer reviewed studies published till December 2015 on the training of CHWs for prevention or control of CVD and its risk factors in LMIC. Study characteristics were extracted using a Microsoft excel spread sheet and quality assessed using Effective Public Health Practice Project's Quality Assessment Tool. The search generated 720 articles of which six were included in the review. One study was a randomized controlled trial while the remaining were before-after intervention studies. The training methods included classroom lectures, some of which were held at the field site, interactive lessons, e-learning and online support, and group discussions or a mix of two or more. All the studies showed improved knowledge level post-training and two studies demonstrated knowledge retention six months after the intervention. This review demonstrates that there is little information about CHW training for CVD prevention and control. Well conducted mixed methods studies are needed to provide reliable evidence about the effectiveness and cost-effectiveness of training programs.

**Keywords:** Community Health Workers, Cardiovascular Disease, Training, Low and Middle Income Countries

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## OVERCOMING THE CHALLENGES OF FACILITY BASED DELIVERY IN THE MUNICIPALITY OF KAPANGAN

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### **ABSTRACT**

Ten to fifteen years ago the accepted norm was a home based delivery so long as the mother was seen by health personnel during her ante natal period. The millennium development goals of 2000 highlighted that facility based deliveries was crucial to preventing maternal and neonatal deaths. This challenged the status quo in the municipality and it put into action ways of attaining 100% facility based deliveries. The municipal and barangay health boards enacted ordinances and resolutions encouraging pregnant mothers to deliver in a health facility. The shift is linked with the construction and upgrading of health centres in the municipality through the Health Facility Enhancement Program of the Department of Health and the robust support of the local government unit. Health facilities were licensed as maternal care and new-born care package providers offering an alternative for those who refuse to deliver in the hospital. This resulted in better access for pregnant women during birth. Most health workers were also trained to carry out basic emergency obstetrics and neonatal care (BEMONC) and new-born screening. Health insurance offered to pregnant mothers reduced the burden of delivering in a health facility. A substantial factor that contributed in the increase of facility based deliveries were the collective efforts of the Community Health Teams and the Barangay Health Boards' advocacy. Ultimately, in 2016 was able to sustain 0% Maternal Mortality over the past years and a very low infant mortality.

Keywords: Facility Based Delivery, Shift, Maternal Care, Home Delivery, Maternal Mortality



C3

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## FEASIBILITY OF COMPULSORY STATE HEALTH INSURANCE SCHEMES USING A COMMUNITY APPROACH

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### ABSTRACT

Nigeria operated a centralized Health Insurance since 2005, however less than 5% of the population has coverage. In an effort towards attain Universal Health Coverage; the Federal Government decentralized compulsory health insurance to states. A household survey was conducted in a southern state to determine feasibility factors that will ensure a community-acceptable, viable and sustainable scheme for universal financial risk-protection. Results shows high out of pocket expenditures (94.6%), low health insurance coverage (1.7%) and approximately half (50.3%) of households at risk of catastrophic health expenditures. Household annual per capita spending was N19, 656 (\$64.4); much higher than the NHIS premium with a dominant share of outpatient OOP (51.7%) being spent on sub-standard quality of care. Awareness of health insurance is poor (27.7%) in adults; however on being educated on the benefits, 83.6% are willing to buy health insurance. The wealthiest quintile are more unwilling to pay (17.6%) than other Quintiles (20.3% – 21.1%). Only 6% of the poorest (Q1) are able to pay at the NHIS premium rate without catastrophe, with ability to pay rising to 36% in the Q3 and 89% in the Q5 households. These results show a huge need and high community willingness for compulsory health insurance in the state; with the poor more willing but less able to pay. To ensure financial viability and sustainability of the scheme, mechanisms for subsidizing the poor and eliciting progressive contributions from the wealthy need to be devised, with accompanying awareness creation on benefits for widespread community acceptance.

Keywords: Health, Access, Catastrophe, Financing, Risk-Protection, Coverage

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**PARTICIPATION OF FARMER HOUSEHOLD NON-CONTRIBUTION  
ASSISTANCE RECIPIENT IN THE NATIONAL HEALTH INSURANCE  
PROGRAM IN INDONESIA**

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***ABSTRACT***

Indonesia has set the achievement of Universal Health Coverage in 2019. Community participation in the national health insurance program was the key to success, especially for non contribution assistance recipient community in premium payments. Participation of farmer household non-contribution assistance recipient in the national health insurance program is very low. Therefore, this study aims to analyze the factors that influence the participation of farmer households non-contribution assistance recipient in Jember District (agricultural center in East Java, Indonesia). This research used quantitative method with observational approach. The research variables consist of knowledge about national health insurance, choice of payment method for health service (out of pocket or pay a premium), ability to pay premium, and participation in health insurance program. Data analysis was performed by logistic regression. The results showed that there were influence between knowledge and choice of payment method for health service toward the willingness of the respondent to participant of national health insurance. The low participation of respondents was also influenced by the low ability to pay premiums and the availability of funds only at harvest time, so that the participation of the farmers is low.

The conclusion was that the participation of farmer household non- contribution assistance recipient was influenced by their low knowledge of benefits and liabilities in the health insurance program, the choice of payment methods and their inability to pay premiums.

Keywords : Participation, Farmer Household, Health Insurance

C5

[17]

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**STRESS AMONG RESIDENTS IN A TERTIARY CARE CENTER, RIYADH, SAUDI ARABIA: PREVALENCE AND ASSOCIATED RISK FACTORS**

A.A Bahnassy

*Faculty of Medicine, King Fahad Medical City, Saudi Arabia***ABSTRACT**

**Introduction:** Residency training is demanding and can be stressful and level of need to be assessed

**Objectives:** To examine perceived stress among medical and surgical residents in King Fahad Medical City, Saudi Arabia and its associated risk factors.

**Methods and Results:** A cross-sectional study of all King Fahad Medical City residents in medical and surgical departments registered at the Saudi Commission for Health Specialties, Riyadh, Saudi Arabia, was conducted in November– December 2016. The likelihood of stress was assessed using the Kessler (K6) tool. All available residents (104) from departments of medicine and surgery were included in the study. Only 87(83.7%) responded. The mean age for the residents was  $27.83 \pm 2.9$  years with mean experience in this tertiary care center  $2.39 \pm 1.8$  years. The mean ( $\pm$ standard deviation) stress scores was  $20.1 \pm 5.6$  out of 30 (67%). Mean stress scores was significantly associated with female gender, non-Saudis, surgery department residents and being in R5 residents. No significant mean difference was noted according to marital status or age. According to stress level the results showed that 7 (8.6%) are well with no stress, 27(33.4%) have mild or moderate stress levels, while 47 (58%) of the residents have severe stress level. There is a significant association between severe stress level and advancing age, surgery and non-Saudi residents. The significant predictors of stress were the department and gender only. Total stress level was significantly correlated with feeling of being unable to work during the last 30 days,

**Conclusion:** Residents in in this tertiary care center, Saudi Arabia are at comparable or slightly higher risk of perceived stress than that reported among residents worldwide .Stress level was significantly associated with gender, nationality and department. There is an urgent need for stress management programs during residency training.

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## THE EFFECT OF BEING IN PAID WORK AFTER IN LATER LIFE ON MORTALITY AND MORBIDITY: EVIDENCE FROM JAPAN

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### **ABSTRACT**

More and more nations, especially which have experienced population aging, give an emphasis to raise public pension age for reducing the number of pensioners and extending working life. Little work has been done, however, on effects of work in later life on elderly workers' health. Thus, the purpose of this study is to verify the impact of being in paid work after public pension age on mortality and morbidity in Japan using the National Survey of Japanese Elderly, which is a face-to-face survey for those aged 60 and over. The association between being in paid work after public pension age and incidences of death, cognitive decline, ADL decline, stroke, diabetes during follow-up was assessed. In the analysis, the existence of *healthy worker effect*, that is, those who continued to work were likely to be healthier than those did not, and sample attrition were considered by using propensity score analysis and survival analysis. Even after controlling the difference in characteristics at baseline including health condition between those in paid work and those not, this empirical study suggests that being in paid work after public pension age has a positive impact on morbidity. Furthermore, times to onsets of stroke, and diabetes for men, of ADL decline for women were significantly delayed when they were in paid work after public pension age. This result can imply that continuing to work in later life if it is possible might extend healthy life expectancy by delaying or preventing onsets of some diseases.

Keywords: Work, Public Pension Age, Health, Propensity Score Analysis

D1

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**PREVALENCE OF *Campylobacter* IN LESS THAN 10 YEAR CHILDREN IN  
SOUTHERN PUNJAB, PAKISTAN**

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**ABSTRACT**

*Campylobacter* gastroenteritis is one of most common bacterial infections in humans. Campylobacteriosis is under reported in developed and in developing countries. *Campylobacter* can colonize lower intestinal tract especially jejunum, ileum and colon. Nearly 7.5 million DALYs with economic loss of \$ 1.2 – 4 billion is incurred worldwide. *Campylobacter jejuni* and *Campylobacter coli* are commensals in poultry. In humans, campylobacteriosis is a sporadic infection with low CID in children. Complications such as Guillain Barré syndrome, reactive arthritis and fisher syndrome are seen in few patients. The aim of the study was to identify epidemiological risk factors associated to *Campylobacter* infection. During 10 month study, standardized questionnaire was recorded for Chicken purchase and shop hygiene, family demography, clinical exposure, screening of stool samples along with incidence of infection. A total of 76 stool samples of Children up to 10 years with diarrhea were collected from different districts within south Punjab. Parameters like large family sizes, number of infants, area and location of houses, occupation of head of family, available source of water for washing chicken irrespective of its cleanliness, time duration of wash were assessed. Screening of less than 10 years children show 19.7% stool samples were positive for *Campylobacter* species. Maximum numbers of children affected by *Campylobacter* are of age group 5-6 years. Results indicate unhygienic conditions both at chicken purchase shop and home was highly significant to *Campylobacter* infection ( $p$  value 0.004 at CL 95%). The data provide better understanding of the contributing risk factors for transmission and may provide means to prevent its infection.

D2

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**TOWARDS AN ACCEPTABLE HIV PREVENTION TECHNOLOGY POST 2016: A  
QUALITATIVE STUDY OF MICROBICIDES AMONG UNIVERSITY STUDENTS  
IN KWAZULU- NATAL, SOUTH AFRICA**

P.B Nota

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**ABSTRACT**

In Southern Africa women between the ages of 15 to 24 are twice more likely to be infected with human immunodeficiency virus (HIV) than men. Female vulnerability to HIV infection is exacerbated by various social, cultural, economic and biological factors. The development of biomedical HIV prevention technologies such as topical pre-exposure prophylaxis (PrEP) has merit for advancing the new health and development agenda for women post 2016. This paper discusses findings from a small-scale perception study of topical PrEP products amongst female students at the University of KwaZulu Natal, South Africa. Focus group discussions with young women (between the ages of 18 to 35) were conducted as a data collection method in order to explore female students' perceptions, attitudes and acceptance levels towards two PrEP products; the ten of ovir gel and the dapivirine ring. Data was analysed through thematic analysis, and a culture-centred approach was used to explore female students' preferences towards HIV prevention technologies with the objective of knowing what potential users desire and need. Product characteristics are critical variables that influence acceptance, product uptake and adherence. Covert use of topical PrEP was the most appealing characteristic for females in this study. Cultural factors that can discourage women from using these biomedical prevention tools need to be factored into the product development and design. Understanding the cultural context and key determinants that influence behaviour will impact the acceptance and approval of topical PrEP.

Keywords: HIV Prevention, PrEP, Culture-Centred Approach (CCA) and Women

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## KNOWLEDGE, ATTITUDE AND PRACTICE TOWARDS DENGUE IN URBAN AREA OF INDONESIA

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### ABSTRACT

Dengue is a major public health problem in the world. Knowledge, Attitude, and Practice (KAP) are an important component in a Dengue prevention program mainly as a basis data for planning dengue intervention with the community based approach. This article provides evidence on Dengue KAP in the urban area. A cross-sectional study was conducted in spring 2014, 524 households from 2 villages in urban areas were involved. Both of villages represented an area in the high level of dengue prevalence. KAP information was gained from family members (> 15 years old) through survey questionnaires. Informed consent was obtained before the inquiry was started. There was no significant association between the two research areas. Participant's knowledge was predicted by age (OR 0.739, 95% CI 0.615-0.888, p=0.001) and education (OR 1.349, 95% CI 1.064-1.739, p=0.021), while practices were predicted by occupation (OR 1.217, 95% CI 1.094-1.353, p=0.001). This discovery indicates that local authority had acknowledged community with some information regarding dengue prevention despite the fact that there were some misconceptions in the common knowledge related the identification of the breeding site outside the house and mosquito behavior. Thus, it is expected that by targeting women working as a housewife with an intensive health education and promotion will lead to the desired reduction of dengue cases.

Keywords: Knowledge, Attitude, Practice, Dengue, Urban, Indonesia

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**PARTNERSHIP OF CADRES TB-HIV CARE AISYIYAH TO INCREASE CASE  
FINDING RATE TUBERCULOSIS IN JENEPONTO, INDONESIA**

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**ABSTRACT**

Tuberculosis is a problem of health society that caused by mycobacterium tuberculosis and become the leading cause from number of deaths with infectious diseases. It is not easily dealt with by the staff from department of health even the various programs which come from the government have not been able to break the chain of TB transmission in Jeneponto. Therefore, it needs community contribution, so both elements, either government or community can make a partnership to overcome the TB problems in Jeneponto. The findings were obtained by a cadre of TB in a community SSR TB-HIV Care Aisyiyah at Jeneponto in 2016. There were 839 TB suspects and 136 new TB patients consisting of 54 positive smear and 82 positive RO. With the partnership cadre of TB-HIV Care Aisyiyah, is expected to assist in controlling TB in Jeneponto through networking in the community, education and socialization of tuberculosis as well as assistance in TB patients. Conclusion: Kader TB have a role in the discovery of TB cases in the county Jeneponto. Suggestion: it is expected to the government in order to develop cross-sectoral cooperation, and empowering the community to the problem of TB disease can be overcome in Jeneponto regency. In addition to the expected participation of the public in protecting the environment and keeping themselves in order to get a better health status.

Keywords: Partnership, Tuberculosis, Cadres TB



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**CERVICAL CANCER AND PAP SMEAR SCREENING: KNOWLEDGE,  
ATTITUDE AND PRACTICE AMONG WORKING WOMEN IN NORTHERN  
STATE OF MALAYSIA**

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**ABSTRACT**

Cervical cancer is among the most common cancer in women worldwide, and Pap smear test is the primary screening procedure used to detect abnormal cells that may develop into cancer. The objectives of this study were to determine the knowledge of working women about cervical cancer and Pap smear test and their attitude about the test. Their uptake of the test and the association with socio-demographic factors were also investigated. This cross-sectional study recruited 260 women entrepreneur of *Sahabat Amanah Ikhtiar* in Northern state of Malaysia who were between 20 – 65 years old, married or previously married and had no history of being diagnosed with cervical cancer. Only 37.3% participants had done Pap smear within the past 5 years. Less than half of participants knew that unpleasant discharge (41.5%), abnormal bleeding between periods (48.1%) and discomfort or pain during sex (41.9%) were the symptoms of cervical cancer. Additionally, only 18.5% knew that vaginal discharge was not a symptom of cervical cancer. Besides, only 33.1% of participants knew that Human Papilloma Virus infection is a risk factor for cervical cancer. In general, our participants showed positive attitude towards Pap smear screening. There was a significant relationship between age, family planning practice, history of been pregnant with Pap smear uptake. In conclusion, the uptake of Pap smear screening among working women in Northern state of Malaysia is low even though most have positive attitude towards Pap smear screening. Their knowledge about cervical cancer and Pap smear test was also limited.

Keywords: Pap Smear, Cervical Cancer, Working Women

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**DETERMINANTS OF PHYSICAL ACTIVITY IN A COLLEGE STUDENTS'  
ASSOCIATION OF SOUTH SUMATERA INDONESIA**

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**ABSTRACT**

Although regular physical activity such as walking, cycling, or participating in sports has significant benefits for health, a lot of Indonesian people are not sufficiently active. Indonesian Ministry of Health reported South Sumatera as one of province which has a lot of insufficiently active people (26,7%). It was higher than the average number of insufficiently active people in Indonesia. Thus, examining the determinants is an important prerequisite for designing effective programs. This study investigated predisposing (knowledge and attitudes), enabling (time and facilities availability), and reinforcing (family, friends, and health professional support) factors determined physical activity for the college students in South Sumatera. This study used cross-sectional design. Data were analyzed for 50 member of the college students' association who completed a questionnaire. All variables were self-reported. Result showed 60% of respondents were sufficiently active. Chi square test revealed that knowledge ( $p=0,003$ ;  $OR=8,0$ ), attitudes ( $p=0,001$ ;  $OR=21,0$ ), and facilities ( $p=0,012$ ;  $OR=6,5$ ) had meaningful relationship with physical activity. There was no relationship between time availability ( $p= 0,636$ ), family ( $p= 0,302$ ), friends ( $p=1,0$ ), and health professional support ( $p= 0,861$ ) with physical activity. The findings clarified the factors that determined physical activity in a college students' association of South Sumatera were knowledge, attitudes, and facilities. These factors may help in the formulation of intervention strategies to make people more physically active.

**Keywords:** Determinants, Physical Activity, College Students

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## THE HEALTH IMPACTS OF REDUCED RESIDENTIAL SOLID FUEL BURNING ON THE SOUTH AFRICAN HIGHVELD

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### **ABSTRACT**

In 2015, the World Health Organization named air pollution the "greatest avoidable cause of death and disease globally". Household air pollution (HAP) from solid fuel burning in and around the home has been proven to be especially harmful to human health. In South Africa, an estimated 13 million low income households still rely on various forms of solid fuel for some or all of their energy needs, resulting in high levels of exposure and substantial health impacts for the poorest members of society. Intervention measures aimed at reducing HAP have the potential to improve public health, overall ambient air quality and substantially reduce the associated economic burden in targeted areas. These measures are often implemented on the community scale and their success judged only on improvements in air quality. The public health and economic benefits of reduced HAP are rarely considered; thus, their success is often underestimated and measures deemed non-viable for large scale implementation. A need exists to model the health impact of community interventions on a larger scale. Our study aimed to fill this gap by modelling the health impact of the regional scale implementation of an intervention measure in low income settlements on the South African Highveld. Results indicate that even small reductions in HAP levels in this densely-populated area will have significant long term public health and economic benefits. These results can inform decision making and ensure that valuable resources are spent on only the most effective intervention measures.

Keywords: Household Air Pollution, Health Impact Assessment, Air Pollution Intervention

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**OBESITY PREVENTION THROUGH *CANGKRUKAN*, EATING AND PHYSICAL  
HABIT AMONG STUDENTS OF SENIOR HIGH SCHOOL IN SURABAYA,  
INDONESIA 2017**

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**ABSTRACT**

**Background:** One of the health strategic issues of 2015-2019 is about obesity, condition where excess body fat builds up, that can be harmful to health. Based on Riskesdas data in 2013, it can be seen that the prevalence of obesity at the age of 16-18 years in Indonesia was 1.6%, East Java was 2.0% and Surabaya was 3.1%. It can be concluded that East Java and Surabaya have a prevalence of adolescent obesity above the national prevalence. **Purpose:** This study aimed to highlight obesity prevention through *cangkrukan*, eating and physical habit among students of senior high school in Surabaya, Indonesia. **Methods:** A cross-sectional survey was carried out among 400 students of senior high schools (196 males and 204 females) in Surabaya, Indonesia. A pre-validated self-reported questionnaire was used to collect the data. Weight and height were measured and body mass index was used to determine nutritional status. **Results:** Sex, *cangkrukan*, activity, fruits and vegetables intake, instant noodles, fast food/fatty foods, bread/chips/donut/snack, mineral water intake was positively associated with nutritional status ( $p < 0.05$ ). **Conclusion:** Socio-demographics, *cangkrukan*, activity, and nutritional factors are major determinants of adolescent obesity in Surabaya. **Recommendation:** There is an urgent need to implement awareness as well as behavior modification programs targeting adolescents, parents and schools to control adolescent obesity.

Keywords: *Cangkrukan*, Eating, Physical Habit, Nutritional Status, Obesity Prevention

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**SURVEY OF INDONESIAN PUBLIC AWARENESS INDEX ON DRUG AND FOOD**

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**ABSTRACT**

Drug and food which marketed in Indonesia must meet quality and safety requirements that are regulated by NADFC-RI. A Survey of Indonesian Public Awareness Index on Drug and Food was conducted in 2016 with the objective of obtaining Public Awareness Index score in National scale. The Public Awareness Index is a measure (on a 100 / likert scale) that explains the level of public awareness in understanding, acting, and in the daily behavior of choosing and consuming drug and food products. The sampling methodology used census blocks with home visit techniques in the survey area of 15 Provinces and a total of 5,240 household respondents. The Respondents are the general public at selected location with at least 15 years of age. Using approach of the Knowledge, Attitude & Perception, Practice Study to get information about people's knowledge, attitude and behavior in choosing drug and food including traditional medicines, cosmetics and food supplements. Measurement of index survey was conducted using questionnaires that were delivered face to face and the data analysis statistically used SPSS. The study resulted the value of the Public Awareness Index on Drugs (Ethical and Antibiotic) = 65.78, Other Drugs (Traditional medicine and Vitamin) = 49.23, Cosmetics = 71.54 and Processed Food = 75.36. Overall, it can be concluded that Indonesian Public Awareness Index was at a score of 65.48. This position shows the public has been GOOD ENOUGH consciousness in choosing and consuming drug, traditional medicine, cosmetic and food products.

Keywords: Indonesian, Public Awareness, Index

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## ERGONOMIC WORK STATION IMPROVEMENT FOR WOOD-CUTTING PROCESS IN FURNITURE FACTORY

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### **ABSTRACT**

Furniture makers have to sit and stand for long time periods and work with risk postures such as bending, reaching, twisting, and repeating movement. These conditions may cause fatigue and musculoskeletal disorder among workers. This study was to evaluate worker's muscle fatigue using Body Discomfort questionnaire; the risk level of working posture using the Rapid Entire Body Assessment technique (REBA). The preliminary survey's results illustrated that the highest fatigue and risk of work postures of workers occurred in wood-cutting process. Therefore, this study was to reduce this ergonomic hazards in wood-cutting process using ergonomics design. The work station was improved as follows: increasing of desk height from 70 cm. to 95 cm to reduce frequency of bending postures; and increasing of desk length from 150 cm to 210 cm. to increase working area. After work station improvement, the fatigue and working posture risk of workers were reduced from high to moderate comparing with before improvement. Moreover, satisfaction feeling of workers to new work station were increased in high level compare to the old work station. In conclusion, this improvement can be applied to cutting process in other manufacturing for reducing musculoskeletal disorders of workers.

Keywords: Furniture, Body Discomfort, REBA, Ergonomics

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## WORK ENVIRONMENT ASSESSMENT OF A COMMUNITY RICE MILL: A PILOT STUDY IN THAILAND

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### **ABSTRACT**

The objective of this study was to describe the potential occupational hazards experienced by workers in a community rice mill at Nakhon Ratchasima province. Total dust, respirable dust, and bioaerosols were measured by NIOSH method no.0500, 0600, and 0800, respectively. Heat stress index (WBGT) and noise were evaluated as well. The results showed that concentration of total dust and respirable dust in rice mill process ranged from 0.30 to 15.32 and 0.13 to 1.24 mg/m<sup>3</sup>, respectively. The total bacteria and fungi concentration was found at the range of 8,860 - 14,105 and 1,217 - 9,400 CFU/m<sup>3</sup>, respectively. The highest concentration of these parameters was found at the process of feeding paddy from bags to the dumping pit. Noise measurement revealed that the range of noise level was 81 - 89 dBA, the highest level at the rice polisher area. Heat exposures in the rice mill were not exceed the WBGT standard. This result suggested that the hazard controls, involving aerosols especially in feeding paddy process and noise at rice polisher, should be implemented to protect the health of workers in community rice mills.

Keywords: Occupational Health, Work Environment, Community Rice Mill

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**BIOAEROSOL MEASUREMENT USING DIFFERENT EQUIPMENT: A  
PRELIMINARY STUDY IN COMMUNITY RICE MILL**

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**ABSTRACT**

Bioaerosol is one of important hazards in rice mills. This pollutant can cause adverse health effects for workers such as allergies, infectious diseases, and acute toxic effects. The purpose of this study was to evaluate bioaerosol concentrations using different bioaerosol sampling tools (Air sampler SAMPL'AIR™ and BioStage single-stage impactor with QuickTake 30 sample pump) at various sampling times. This study was conducted in a community rice mill at Nakhon Ratchasima, Thailand. The results showed that the average concentration using Air sampler SAMPL'AIR™ with 30 seconds of sampling time had the range of 1,320 – 5,660 cfu/m<sup>3</sup> for bacteria and 4,740 – 25,180 cfu/m<sup>3</sup> for fungi, whereas using BioStage single-stage impactor with Quick Take 30 sample pump with 1 - 3 minutes of sampling times, the concentration had the range of 1,217 – 9,400 cfu/m<sup>3</sup> for bacteria and 8,866 – 14,105 cfu/m<sup>3</sup> for fungi. The highest concentration of both tools was found at the process of feeding rice from bags to the damping pit. For bacteria, the results from both bioaerosol sampling tools was likely similar trend, whereas the results for fungi did not show the similar trend. Further study should be conducted in various setting workplace which have different bioaerosol concentrations.

Keywords: Bioaerosol Concentration, Community Rice Mill, Bioaerosol Sampling Tools



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**ERGONOMIC RISK FACTORS AND MUSCULOSKELETAL DISORDERS  
SYMPTOMS AMONG NATURAL STONE CARVING CRAFTSMEN**H Djamalus<sup>1</sup> and A Paramitha<sup>1</sup>*<sup>1</sup>Department of Occupational Health and Safety, Faculty of Public Health, Universitas  
Indonesia, Indonesia***ABSTRACT**

Natural stone carving is one of the informal sectors in Indonesia. Due to the nature of stone carving process, the workers are constantly exposed to manual work process and high risks of musculoskeletal disorders (MSDs). This study aimed to analyze the ergonomic risk factors (age, the length of employment, duration of work per day, Body Mass Index (BMI), smoking habits, and exercise activity) and MSDs symptoms among natural stone carving workers in Duta Alam, South Jakarta 2014. The Rapid Entire Body Assessment (REBA) was used to measure ergonomic risk and Nordic Body Map (NBM) to identify MSDs symptoms. The ergonomic risk was collected using questionnaires. REBA assessment showed 6 tasks with moderate risk and 8 tasks with high risk. It found the highest MSDs symptoms has occurred at the bottom and top of loin (92.9%) of workers. Health complaints included stiffness, pain, numbness, and cramps/spasms. Other factors associated with MSDs symptoms are age, length of employment, duration of work per day, BMI, smoking habit, and exercise activity. The MSDs symptoms have severely occurred in workers with age  $\geq 30$  years, the period of employment  $\geq 3$  years, working more than 8 hours per day, obese, smoker, and have not exercise activity.

Keywords: MSDs, REBA, Nordic Body Map, Craftsmen

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**AUTOMATED OCCUPATIONAL CARCINOGEN EXPOSURE ASSESSMENT  
SYSTEM: APPLICATION OF AN INNOVATIVE TOOL FOR MALAYSIAN  
MANUFACTURING EMPLOYEES**

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**ABSTRACT**

The International Agency for Research on Cancer predicts that burden of occupational cancer in middle-income countries will show an estimated increase of 78% by 2030, as compared to cases recorded in 2008. The problem of occupational cancer can be predicted by estimating the population of employees exposed to known carcinogens. This paper aims to present on application of OccIDEAS as an innovative online tool for retrospective occupational carcinogen exposure assessment among manufacturing employees in Malaysia. A total of 27 Job Specific Modules and 39 Fragments List from OccIDEAS was selected and developed as Malaysian version of the application. Content validation of the modules was performed by nine Occupational Safety and Health experts from government and private settings. Four independent translators carried out the Malay translation process of the original English modules. The Malay-translated modules were reviewed by three industrial experts with manufacturing background for its local context and cultural suitability. Test interviews were carried out next through self-performing mode for assessment of technical feasibility and systemic inconsistencies of the tool. The application was pilot tested with a response fraction of 42.1% (37 respondents). It was then used to conduct a cross sectional study among 1291 manufacturing employees. The respondents were randomly selected from Health Screening Programme database of the Social Security Organization. The Malaysian version of OccIDEAS is an efficient and reliable tool for estimation of occupational carcinogen exposure. It can be further expanded for risk estimation in other work sectors in the country and to support related policy decisions.

**Keywords:** Occupational Carcinogen, Occupational Exposure, Risk Assessment, Cancer Epidemiology

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## IMPACT OF PHYSICAL ABUSE ON GROWTH AND DEVELOPMENT OF CHILDREN AGED 3-5 YEARS IN RURAL VIDARBHA

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### **ABSTRACT**

Child abuse has serious physical and psycho-social consequences which adversely affect the health and overall well-being of a child. It is violation of the basic human rights of a child and is an outcome of a set of inter-related familial, social, psychological and economic factors. Child abuse leads to emotional, physical, economic and sometimes legal consequences for the children aged 3-5 years. It is a globally prevalent and preventable phenomenon. Objectives of the study were 1) To identify the relationship between parent reported physical abuse and cognitive development, 2) To identify the relationship between parent reported physical abuse and motor development, 3) To identify the relationship between child reported physical abuse and cognitive development and 4) To identify the relationship between child reported physical abuse and motor development of the children. Material used for data collection include Physical abuse questionnaire and DMC. A cross sectional study among 200 each parents and children in the age 3-5 years old was conducted in rural areas of Vidarbha region. A statistically significant correlation was found between assaulting the child and cognitive development of the children as reported by the children. Negative non significant weak relationships of cognitive and motor development were found with slapping, pinching, starving, beating, pushing/pulling the child and locking the child alone in a room as reported by both the parents and the children themselves.

**Keywords:** Physical Abuse, Cognitive Development, Motor Development

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**COMPARISON OF PARENTS AND CHILD PERCEPTIONS: - RELATED TO PARENTING EFFICACY AND CHILDHOOD OBESITY, LUDHIANA, PUNJAB**

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**ABSTRACT**

Parents play an important role in obesity prevention. Children rely on their parents to guide their eating and activity behaviors. Rising prevalence of obesity in children is a critical issue globally. Parenting efficacy, specifically the ability to control, discipline and set boundaries is key element in managing healthy eating and activity in the home. Current evidence suggests that interventions directed at parents during child's early years may have an impact on the prevention of childhood obesity. The present study was done to describe child and parents perception of parenting efficacy participating in GOH, Gift of Health through nutrition and exercise intervention program and explore the relationship between perception of parenting efficacy and child BMI. A descriptive cross sectional study done on 100 parents and children selected by convenient sampling. Parenting efficacy and child perception was obtained from data collection packet and correlated with baseline data i.e., BMI. Inclusion criteria was related to regional language, age of the child (8-16 yrs), residence, socio economic status, gender of the child, dietary pattern and physical activity. The questionnaire packet included demographic questionnaire and adapted tool to measure parenting self-efficacy (TOPSE) is a multi-dimensional instrument of 5 point scale. Data were collected by organizing a camp on GOH program. A correlational analysis was done to determine relationship between parental efficacy and child perception and child BMI. The overall reliability of the tool is 0.94 and validated by appropriate experts and reviewed. Based on revised 2002, Health promotion Model by N.J Pander. Findings of the study were that parents efficacy reported 38% average, high 72% and child 37% average and high 63%. Paired t-test did not find any significant differences between parent and child perception. The mean BMI for child participants was classified as overweight 85<sup>th</sup> -95<sup>th</sup> percentile and obese BMI>95<sup>th</sup> percentile and it was concluded that emphasis is needed to consider the family approach to develop intervention for research and practice related to childhood obesity.

Keywords: Parenting, Child, Obesity

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**READINESS OF THE GROWTH AND DEVELOPMENT PROBLEM OF  
CHILDREN AGED UNDER 5 YEARS INTERVENTION PROGRAM IN  
BANGKALAN**

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**ABSTRACT**

The problem of child under five years old growth and development in Madura includes a high cases incidence, but scope of early detection and intervention is very low. Factors that play a role is the low ability of community participation to follow posyandu and not all midwife trained. This study is aimed to asses the preparedness of child growth development problems intervention program and resource to overcome the problem of child under five years old growth development. This qualitative study conducted on April 2017 in Bangkalan Health Office, Indonesia. Respondents are Chief of Family Health and Midwife as health care program managers and also nutritionist as nutrition program manager in Bangkalan district as key speakers. Data were collected by indepth interview and validated using triangulation method. The result shows that Family Health Chief of Health Office told that Bangkalan is the highest rate for National health survey in East Java Province especially for child under five years old severe malnutrition and also high stunting cases. The program managers told that most of midwives still untrained for early detection of child growth development, lack of nutritionist, reffered management, and multisectoral uncoordination. Low participation to join posyandu and after health provider found severe malnutrition child, unfortunately almost half of mothers refuse to be reffered and accept it as destiny. So, Multisectoral coordination and intervention can be better ways in preparing of child growth development problems program and involving social capital as resources in society by colaborating with public figure and departments.

Keywords: Child Growth and Development

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**BEST PRACTICES TO DECREASE ACUTE RESPIRATORY INFECTIONS IN  
UNDER FIVE YEARS CHILDREN IN SURABAYA: AN ENVIRONMENTAL  
HEALTH PERSPECTIVES**

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***ABSTRACT***

Acute respiratory infections (ARIs) are the leading cause of morbidity and mortality from infectious disease worldwide, particularly affecting the youngest and oldest people in low and middle-income nations (WHO, 2014). There were some areas in East Java with ARIs among under five years children is high enough, one of Surabaya with 4,306 cases (Department of Health, 2014). The aim of this research was to describe best practices to decrease acute respiratory infections in under five years children in the primary health care. This research was an observational study with cross sectional design. Research sample was 5 primary health care with highest cases from 2014 to 2015. Data collection were carried out with questionnaire and observation form and analyzed using descriptive method. The result showed that all primary health care have guidance for infection prevention and control measures but not well implemented. There were 3 primary health care have support unit to solve the infection diseases named sanitation clinic unit that responsible for identify infection diseases, communicate with community, observation housing sanitation and also give recommendation to the community. This unit also do the surveillance for environmental based diseases. These guidelines and sanitation clinic unit will contribute to improving health care practices in Indonesia.

Keywords: Acute Respiratory Syndrome, Sanitation Clinic, Environmental Health

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## EFFECT OF MATERNAL VITAMIN D LEVELS ON ANTHROPOMETRIC MEASURES IN INFANTS

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### ABSTRACT

Many studies from the Asian region have shown the existence of vitamin D deficiency among pregnant and lactating mothers despite having abundant sunlight. There are no data available in Sri Lanka on maternal vitamin D deficiency and vitamin D supplementation is not provided in state run antenatal clinics. Thus, it is important to investigate maternal vitamin D status and its impact on anthropometric parameters of the offspring. Sixty one mothers who did not receive vitamin D supplementation were recruited. Vitamin D levels were measured using mini VIDAS vitamin D total kits. Birth weight, length and head circumference (HC) of the babies were measured using a non-stretchable tape at birth and at 4-6 weeks of age. Eleven babies did not come for 4-6 week review. Data were analysed using SPSS software. The mean weight, length and HC of babies at birth were  $3.03 \pm 0.49$  kg  $51.9 \pm 8.0$  cm and  $32.6 \pm 4.9$  cm and at 4-6 weeks  $4.1 \pm 0.79$  kg,  $55.6 \pm 5.0$  cm and  $36.6 \pm 1.3$  cm respectively. Mean vitamin D level during 3rd trimester of pregnancy was  $17.3 \pm 6.5$  ng/mL. Vitamin D deficiency ( $<20$  ng/mL) was found in 70% of mothers. There was no correlation between maternal vitamin D levels and length, weight or HC of both at birth and 4-6 weeks of age. A high rate of vitamin D deficiency was observed among women who did not receive supplementation. However, deficiency did not show an impact on the HC, length and weight. Therefore findings do not support use of vitamin D supplementation to improve anthropometry of the offspring.

Keywords: Vitamin D, Infant Anthropometric Measures

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## HEALTH PROFILE AND STATUS OF CHILDREN IN A SELECTED FOUNDLING HOME: BASIS FOR A PROPOSED HEALTH MONITORING PROGRAM

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### **ABSTRACT**

The study aims to determine the current medical and laboratory examination profile of children in Manila Boystown Complex Foundling Home, which will be used as basis in proposing an effective health monitoring program that will redound to the improvement of the health status. The present study made use a descriptive cross sectional method of research. Medical and laboratory examinations were used as method of data gathering. as instruments for date gathering which includes fifty three children housed at Manila Boystown Complex-Foundling Home from November 2012 to October 2013. Notable findings in the study includes Urinary Tract Infection, presence of intestinal parasites and pinworm infection. The result of this study showed that there is a need to propose an effective health monitoring program to improve the present health status of children in Manila Boystown Complex-Foundling Home.



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## INTEGRATING COLLABORATIVE DATA ENTRY TECHNOLOGY IN COMMUNITY HEALTH ASSESSMENT

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### **ABSTRACT**

To better serve a community, the health worker must have a clear understanding of its resources and health needs. These data is essential to plan and deliver relevant, successful and timely health services (CCF, 2013). Community Health Nursing (CHN) students are required to perform household-level field survey on various health indicators to serve as basis for planning health programs, allocating community resources and future health policy directions. As a competency required of the students, they are expected to maintain an organized system of keeping household records. Consolidating questionnaire entries onto a dataset had been a challenge due to gaps in 1.)enumerator calibration on the household survey questionnaire (HSQ) entries 2.) polishing of HSQ entries3.) human factors during encoding, 4.) analysis software utility. To address the aforementioned gaps that could compromise the quality of the outputs, the researchers made use of the Google Forms platform for the data-entry phase of the course. Contained therein are questions derived from the HSQ and made available on-line for data entry on both computer and mobile phone platforms. The innovation was applied during the 1<sup>st</sup> semester 2016-2017 of the CHN course among 754 households of Brgy. Panadtalan, Maramag, Bukidnon. The use of the innovation has lead to the following outcomes: 1.) shortened the data-entry phase of the CHNs community health assessment study, 2.) instructors were able to readily monitor the progress and completeness of the entries, 3.) students were able to use both computer and mobile phones for data entry and 4.) the generated dataset did not require polishing and is ready for analysis.

**Keywords:** Collaborative Entry, Google Forms, Household Survey, Health Informatics

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## **SOCIAL ENVIRONMENTAL FACTORS THAT AFFECTING THE SELECTION OF CONTRACEPTIVES IN GADING PUBLIC HEALTH CENTER TAMBAKSARI SURABAYA**

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### **ABSTRACT**

Long-term contraception method entered into government program because effectively to postponing pregnancy, spacing of birth and terminating fertility. In fact, the women of fertile ages in Indonesia were likely to still choose short-term contraceptive especially injection contraception. This research analyzed the social environmental factors that affecting the selection of contraceptives in Gading Public Health Center Tambaksari Surabaya. This research used analytical study with case control design. Sampling technique used simple random sampling and got 42 cases and 42 controls. The variables were social environmental factors. Data were analyzed using multivariate logistic regression with a level of significance value  $\alpha = 0,05$ . The results showed five significant variables were the role of spouse ( $p=0,002$ ), the role of family ( $p=0,001$ ), the role of health care workers ( $p=0,011$ ), the role of community leaders ( $p=0,0018$ ), and the role of print media ( $p=0,015$ ). Social environmental factors such as the role of spouse, health care workers, community leaders and print media affect the selection of contraceptives in Gading Public Health Center Tambaksari Surabaya. The provision of support and complete information about all types of contraception are important so that the women of fertile ages can choose contraception that suits their need.

Keywords : Family Planning, Long-Term Contraception Methode

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## INTEGRATED MEDICAL CURRICULUM IN MALAYSIA- EXPERIENCE, OUTCOME AND LIMITATIONS

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### **ABSTRACT**

**Aim:** highlight the merits and demerits of integrated medical curriculum in Asian educational and cultural environment.

**Objective:** to present the personal experience of the author with the integrated medical education with especial reference to MBChB of University of Sheffield in Royal College of Medicine at Perak and Monash University at Sunway campus, Kuala Lumpur.

**Method and Materials:** Data of 190 cohorts of final year students from 2002 to 2009 along with their feedback on the merits and demerits of the program were collated and made into simple interpretations. The successful pass out rate varied from 80% to 90% each year with distinctions and honours obtained by few students. After graduation follow-up showed successful employment in the country and abroad. Few students have successfully completed their membership certification in UK and gainfully employed. Feedback on the merits of the program showed excellent communication skill, increased interpersonal relationship with peers and patients, high technical ability in physical examination and in interpretation of lab results. The patients' satisfactions with our cohorts were of high degree. Program as a whole was graded as well structured; mostly student- oriented, loosely guided on day to day basis but keenly supervised on attendance, punctuality, assignment submission and feedback were two way systems. Assessment was felt to be free and fair with use of modern scientific assessment tools. Examination system was judged as most unbiased with multiple examiners and standardized simulated patients. Early corrective measures were taken in case of defaulters and most of the borderline cohorts were successful on subsequent resit examinations. The program was reported to be based generally on concept delivery to stimulate students to fill up the knowledge gap. The feedback on limitation of the program was reported to be inadequate foundation on basic core knowledge, so lack of foundation for post graduate medical education. The feedback highlighted the excessive emphasis on peripheral or superficial knowledge, code of conduct, mannerism, ethics and law. Other items pointed out were inadequate supervision of PBL and SGD and large faculty members' requirement, Lack of sense of duty and service to community and dependence on spoon feeding. Thus the program may be unsuitable for Asian culture and traditions.

**Result:** A highly motivated student centred integrated medical curriculum in our settings has produced excellent results with 4-6 distinction and honours candidates each year.

**Conclusion:** A modified interactive integrated medical curriculum suitable to Asian culture and tradition with modern method of assessment can be implemented in Malaysian environment.

**Keywords:** Medical Education, Patient Centred Medical Education, Self-Directed Learning, Adult Learning

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## EVALUATING THE USABILITY OF THE UGANDA CLEARINGHOUSE FOR HEALTH POLICY AND SYSTEM

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### **ABSTRACT**

Timely access to decision-relevant information increases the prospects for evidence-informed decision making. The Uganda clearinghouse is a source of health policy and systems-relevant information needed to contribute to making evidence-informed decisions about the Uganda health system and interventions there in. We carried out user-based evaluation of the clearinghouse using in-depth interviews from 15 potential users including policy makers, health policy advisors, health managers and researchers to provide evidence of the usability and user experience of the clearinghouse. Participants commended the performance of the clearinghouse and the majority felt that using the resource was worth their mental and physical efforts. Most felt that the clearinghouse provided functionalities for searching correctly the needed information. Remembering different aspects of the site after a short time was not easy for participants, however, most participants felt that navigating and finding information from the site was achievable. Most of them were able to move forward and backwards when navigating the site, adapt and quickly recovered from errors. Inadequate background information about the site and lack of current information were widely reported by participants. Our paper provides insights on issues that affect the usability of one-stop shop for health policy and system information in a limited resource setting. Regularly appraising the information uploaded in the resource, improving its content layout and loading ability as well as optimizing its capacity to customize information can enhance its usability. Knowledge brokers and researchers in similar contexts may apply our findings to develop, implement and evaluate evidence-based health information one-stop shops.

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**INTELLIGENT DIGITAL ON BOARDING**

M Namrata

*Altimetrik India Pvt. Ltd. India***ABSTRACT**

In last few decades on boarding has been evolved from paper based approach to paper less approach and today on boarding can be done anywhere any time with any device. With the emergence of technology and availability of internet on boarding process becomes quite easy. But most of the time patient ends up providing non contextual information. Existing on boarding services give similar experience to all patients despite their age, gender and complaints. This paper is proposing a context aware digital on boarding solution for the patients to personalize patient's on boarding experience. Proposed solution understands patient's context with the help of workflow based questionnaire. Basis of questionnaire is patient's gender, complaint and age group. For example if patient is complaining about chest pain then solution populates questions related to chest pain like severity of pain, is there any reference pain etc, but if patient complains about fever then solution populates question related to fever like what is the temperature etc. Solution populates next question based on the user's response for the first question. This solution generates summary based on the patient's response and publish summary which can help doctors in diagnosing the problem. This solution can be integrated to the existing hospital information system to provide better on boarding experience to the patients. Health Research Institutes through the data collected from the solution, can do health behaviors analysis of patients. Insurance Companies can customize plans based on the patient's need. This solution can be used by health workers who provides health care in remote areas to understand the patient's problem by asking contextualized questions populated by the system and hence they can provide primary care to the patient.

**Keywords:** Digital on Boarding, Context Aware Intelligence, Work Flow Based Questionnaire, Patient on Boarding

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## CHOLERA OUTBREAK IN SAMANA, PUNJAB, INDIA, 2016 - A PUBLIC HEALTH THREAT IN 21<sup>st</sup> CENTURY

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### ABSTRACT

Background: Cholera is an acute diarrhoeal infection caused by ingestion of food or water contaminated with the bacterium *Vibrio cholerae*. Cholera remains a major public health problem affecting primarily developing world populations. Outbreak investigation was undertaken to describe epidemiological characteristics of the outbreak and formulate recommendations to prevent future outbreaks. Methods: Line list of cases was prepared by recording clinical & demographic data on house to house survey. A Cholera case-patient was a person with acute watery diarrhea with or without vomiting in Samana from 5th to 14 June 2016. Stool, Serum samples from case patients were collected along with environmental investigation. Results: Outbreak started in 1st week of June, 2016, peak of cases reported in 2<sup>nd</sup> week of June 2016. 98% (355/361) cases met case definition. 100% cases reported diarrhea. High attack rate (2.88/1000) reported from Gharama, Tej & Tibba street. 54% male affected and median age of cases 25 year with range from 7 month to 90 years. Attack rates among males was 0.67% and high attack rate (0.9%) in <5 year age group. Overall attack rate 0.62 % and case fatality rate 0.84%. 60% of cases hospitalized. 9/10 (90%) water samples non potable, 1/14 (7.14%) stool samples positive for *V. cholera*, 7/7 (100%) Serum samples negative for HAV& HEV. Conclusions: As outbreak was reported from urban area due to contamination of public water supply system, so strengthening of surveillance, monitoring of all outbreaks and notification to relevant authorities are required in the fight against cholera.

Keywords: Outbreak, Case definition, Median age, Attack rate, Surveillance

D6

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**DISEASE BURDEN OF *Clostridium difficile* INFECTION IN ADULTS FROM 2006 THROUGH 2014: RESULTS FROM A TERRITORY-WIDE POPULATION STUDY IN HONG KONG**

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**ABSTRACT**

*Clostridium difficile* infection constitutes a major burden in Europe and the North America. However, investigations of its disease epidemiology remain sparse in Asia. This study aims to investigate the disease burden and clinical outcomes of *C. difficile* infection in Hong Kong over nine years. All *C. difficile* infection cases were identified retrospectively from a territory-wide electronic patient record database in public hospitals in Hong Kong. Cases were defined as the isolation of *C. difficile* or detection of their toxins from fecal specimens. The cases were classified into healthcare-associated or community-associated infections in reference to the Infectious Disease Society of America guideline. The incidence, mortality and recurrence were analyzed. A total of 15,575 cases were identified, including 14,242 (91.4%) healthcare-associated and 799 (5.1%) community-associated infections. The remaining 534 cases were undetermined. The crude incidence increased from 16.21 in 2006 to 46.44 in 2014 per 100,000 population ( $P_{trend} < 0.001$ ). This increase was notably contributed by patients of advanced age (>65 years), which has increased by three-fold over the period. Recurrence became more common and has increased from 5.7% in 2006 to 9.1% in 2014 ( $P_{trend} < 0.001$ ). Regression analysis suggested that antibiotic exposure in eight weeks prior to diagnosis, healthcare-associated infection, and cerebrovascular disease were important risk factors for 60-day recurrence. The incidence of *C. difficile* infection has increased significantly from 2006 to 2014, especially for the elderly. Our data support continuous surveillance of *C. difficile* and consideration of both hospital-based and community-based strategies to prevent the disease.

Keywords: *Clostridium difficile*, Pseudomembranous Colitis, Surveillance, Epidemiology

## IMPROVING HIV/AIDS SURVEILLANCE SYSTEM: FROM MANUAL WAY TO WEB-BASED INFORMATION SYSTEM IN GUNUNGKIDUL, INDONESIA, 2016

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### ABSTRACT

HIV AIDS surveillance system was designed to provide data for decision making. In Gunungkidul, despite the availability of web-based HIV/AIDS information system launched by MoH in 2012, data were still collected manually. This study was conducted to improve HIV/AIDS surveillance in Gunungkidul. This was a descriptive study with evaluation and intervention of HIV/AIDS surveillance system. On May – July 2016, surveillance officers from District Health Office (DHO) and 30 Public Health Centers (PHC) were interviewed using structured questionnaire. We analyzed 2015 HIV/AIDS surveillance data at DHO to assess the performance of HIV/AIDS surveillance. Based on the evaluation, we trained 30 PHC surveillance officers how to use web-based HIV/AIDS information system and developed instruction manual. We found that VCT/PITC data had not been documented during 2015 in DHO and web-based HIV/AIDS information system was not used by PHCs because 80% of the surveillance officers were never been trained. In 2016, we trained all PHC surveillance officers using web-based HIV/AIDS information system and gave them instruction manual. After the intervention, 77% of the PHC sent VCT/PITC data using web-based HIV/AIDS information system. The report showed that during January – December 2016, number of people tested for HIV were 1768 (97.11% female) including 1536 pregnant women and 19 tuberculosis patients, and 139 people were referred to the advanced counseling. Use of web-based HIV/AIDS information system was able to increase the completeness of VCT/PITC data. We recommended DHO should monitor closely the implementation of web-based HIV/AIDS information system and provide supportive supervision to the PHCs.

Keywords: Evaluation, Intervention, Surveillance, HIV/AIDS, Web-based Information System



**HIV STIGMA AMONG MEDICAL STUDENTS IN EAST JAVA, INDONESIA**

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**ABSTRACT**

HIV is still one of the major epidemic disease in the world. Every year there is an increase in case of HIV despite major precaution and treatment to prevent it spreading. If we analyze from several perspective, stigma about HIV is still exist including in health care facilities.. Previous study about HIV discrimination in Asia shows that 80% of the respondents report a discriminative experience during their visit in healthcare facility mainly by health worker. The weakness of this study was the researcher lack sample from Indonesia. While health care stigma can be develop while working, but there is possibilities that HIV stigma already exist in their academic years. This two things and the fact that there is still no research about HIV stigma among medical students. The aim of this study is to explore the HIV stigma among medical students. Cross-sectional study design was chosen for this research with 150 samples were obtained using simple random sampling. This study use Questionnaire survey to collect the data. The result of the study shows that there are tendencies for Stigma among the students. From the perspective of universal precaution, 51.33% of the subjects use extra pair of mask and glove when they interact with HIV patients. 57.33% of the subjects admit that they don't want to use their personal tools to examine HIV patients while 82% of the subjects profess that they will tell their friends if there are any HIV patients so that they can be more cautious while doing examination. From the result above, it can be seen that more than half of medical students still treat patient with HIV differently than non-HIV patients. However, further research need to be done to determine the stigma level using a well-established questionnaire that already approved worldwide.

Keywords: Stigma, HIV, Medical Students

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**REHABILITATION PROGRAM FOR SMOKERS AMONG STUDENT:SMART  
SOLUTION TO DECREASE THE NUMBER OF ACTIVE SMOKER IN SMKN 2  
BANDAR LAMPUNG**

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**ABSTRACT**

Smoking is a bad habit that danger the smoker (active smoker) and the non-smoker (passive smoker). In SMKN 2 Bandar Lampung, or State Vocational High School 2 Bandar Lampung, some amounts of students, have started smoking. Ironically, the students have minimum knowledge about the danger of the cigarette. Therefore, it is urgent to conduct socialization and found anti-smoking. In the attempt to do so, we proposed to form agents (the name of agent is Mr. Narsis) to rehabilitation for smoking students that aimed to educate students about the danger of smoking and delegate the students of SMKN 2 Bandar Lampung will be anti-smoking representatives who understand and able to do socialization, management, and rehabilitation for smoking students as the solution to create a healthy environment in school. The method is the agents were selected from the qualified participants of socialization. The selected students will go through counseling training and become peer counselor for their smoker friends. There will be 50 agents who will be divided into 17 groups, each group will counsel 5 active smoker. There were three simulations conducted with three different skills of counselor in each simulation. Another method used is snake and ladder game about anti-smoking campaign in which contained interactive questions for students about the threats of smoking for students. Finally, there were three evaluations, in pre-socialization, after socialization, and the overall skills of anti-smoking counselor. The result from this program is will be form the agents anti-smoking as counselor and decrease smokers at school.

Keywords: Rehabilitation, Counseling, Anti-Smoking Snake and Ladder

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**CORRELATION BETWEEN PARENTING PATTERN AND MPASI-GIVING  
PATTERN TO NUTRITIONAL STATUS OF INFANTS AGED 6-12 MONTHS IN  
MEKARGALIH VILLAGE**

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***ABSTRACT***

The quantity and quality of food given to the child is important to be thought of, planned, and implemented by their mother or caregiver. Parenting is always associated with the act of food-giving. The purpose of this study was to determine whether parenting pattern and the pattern of MPASI (Makanan Pendamping Asi/Weaning Food)-giving are related to the nutritional status of infants aged 6-12 months in Mekargalih Village. The method used in this study was the analytical method, with cross sectional approach. This study took samples from 64 respondents. The data collection was done with questionnaires and infants weighing. The data analysis was done by using chi-square test. The result of the research regarding mothers' parenting pattern in the terms of attention/support and psychosocial stimulation were in the 'good' category for 63 respondents (98,4%). The pattern of MPASI-giving in infants aged 6-12 months, that is the MPASI-giving age that stretches for the period of 6 months, was confirmed by 45 respondents (70.3%) and the type of MPASI given is the combination of weaning food and breast milk for 43 respondents (67,2%) with the frequency of 3-4 times a day for 50 respondents (78,1%). Most infants, or 49 babies (76,6%), had good nutritional status. The  $p > 0,05$  chi-square test result showed that there was no significant correlation between parenting pattern to infants' nutritional status at the age 6-12 month and further study also showed no significant correlation between MPASI-giving pattern to infants' nutritional status. This study concluded that there was no correlation between parenting pattern and MPASI-giving pattern to nutritional status, because  $p > 0,05$ .

**Keywords:** Parenting Pattern, MPASI-Giving Pattern, Nutritional Status

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## THE IMPACT OF NATIONAL HEALTH INSURANCE KNOWLEDGE ON ENROLLMENT AND HEALTH CARE UTILIZATION IN NORTH JAKARTA

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### **ABSTRACT**

Government of Indonesia launched National Health Insurance (NHI) during 2014 and data by April 2017 show approximately 175 million (70% of populations) is enroll, while 107 million (62%) is premium assistance beneficiaries (PBI). Increasing health care utilization, especially preventive will reduce the cost of diseases. Jakarta is one of a city in Indonesia which have numerous health facilities. The aim of study was to determine public knowledge about NHI and analyses the impacts of the knowledge towards enrollment and health care utilization. A cross-sectional studies was conducted among 139 respondents in North Jakarta. The findings show 89 respondents (64,1%) is cover with NHI, however 59 (42,4 %) of respondents have not utilize. Of all the respondents evaluated 62 (44,6.%) respondents had a fair knowledge of NHI. The knowledge of preventive care services is poor, merely 22,3% respondents know. Compare with poor knowledge, a significant association exists between fair knowledge and willingness to enroll (p value = 0,01, OR = 4,33 (CI 95% : 1,84 – 10,16). Respondents with fair knowledge are more likely to utilize health care than poor knowledge (p value = 0,017 OR = 2,70 (CI 95% : 1,19 – 6,12). This study demonstrates underutilization of national health insurance, especially preventive services. The writer recommends the advisory board a public education campaigns to increase understanding of the NHI scheme and raising awareness of primary preventive care to overcome increases of health care cost.

Keywords: Enrollment, Knowledge, National Health Insurance, Utilization

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**THE DIFFERENCE IN UNIVERSAL PRECAUTION PRACTICE AMONG  
MEDICAL STUDENTS IN HIV AND NON-HIV WARD: A COMPARATIVE STUDY**

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**ABSTRACT**

Every medical practitioner is exposed to the risk of needle stick injury and body fluid contamination. However, it is proven that risk can be reduced up to 50% by practicing Universal Precaution. Some hospitals separate the ward for HIV patients from non-HIV patients to reduce the risk of cross infection between HIV and non-HIV patients. Due to ward separation, health worker might be careless about Universal Precaution practice in non-HIV ward. The aim of this study is to explore the universal precaution practices among medical students in HIV and non-HIV ward. Cross-sectional study design was chosen for this research with 150 samples were obtained using simple random sampling. This study use questionnaire survey to collect the data. The result of the study shows that 100% of the subjects never experienced needle stick injury and or body fluid contamination in HIV ward while 77.33% of them experienced it in non-HIV ward. This is due to the fact that 93.33% of the subjects admit being more cautious when practicing Universal Precaution in HIV ward. Moreover, 91.33% of the subjects profess that they are more afraid of needle stick injury and body fluid contamination in HIV ward than in non-HIV ward. This finding leads to a conclusion that medical students who work in non-HIV ward tend to not properly practice Universal Precaution compared to those in HIV ward.

Keywords: Universal Precaution, Needle Stick Injury, Body Fluid Contamination, HIV, Ward

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**THE ASSOCIATION OF ERGONOMIC MISMATCH AND SELF-REPORTED PAIN  
AMONG STUDENTS OF A COLLEGE IN A PUBLIC UNIVERSITY IN THE  
PHILIPPINES**

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***ABSTRACT***

The main objective was to determine the association between ergonomic mismatch and self-reported pain among third year and fourth year students from a college in a public university in the Philippines. The prevalence of ergonomic mismatch and self-reported pain, as well as the different pain qualities, in the various body parts were determined. The dimensions of the representative Auditorium, Wood-and-Metal, and Plastic chairs were compared with the anthropometric measurements taken while the students were sitting on the chairs in order to assert mismatch. Self-administered questionnaires were used to determine self-reported pain and its quality per body part. Logistic regression was utilized to establish whether an association between ergonomic mismatch and self-reported pain was present or not, while accounting for potential confounders. All respondents were mismatched with the Auditorium chair, 88.68% with the Wood-and-Metal chair, and 89.10% with the Plastic chair. Sitting Shoulder Height to Backrest Height and Hip Breadth to Seat Width contributed the highest mismatch for all three chairs, and the most prevalent pain was heaviness in the back and neck. Association was established for the Plastic chair and Wood-and-Metal chair, with mismatched students 54% and 29% more likely experiencing pain than matched students, respectively. On the other hand, association was established for the Auditorium chair with mildly mismatched students 60% more likely to experience pain than severely mismatched students.

Keywords: Ergonomic Mismatch, Self-Reported Pain

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## MATERNAL AND CHILD HEALTH OF ETHNIC GROUP IN NORTHERN THAILAND

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### **ABSTRACT**

Maternal and child health is very necessary for the health of people in the community. In Thailand, however, the study of maternal and child health had been rarely assessed in the ethnic group. This cross-sectional study aims to assess the maternal and child health of the ethnic group in Chiang Rai Province, Northern Thailand. 560 ethnic people in the reproductive age (15-49 years) were used as the sample group. The data collected by interviewing were analyzed by using frequency, percentage, mean and standard deviation. The results revealed that most of the samples (72.7%) had a fair level of knowledge of maternal and child health. Whereas the attitude and the practice were in good level (mean = 2.68, and 1.67 respectively). It was also found that 81.4% had received antenatal care (ANC). 82.7% of them received 4 times ANC check-up at gestational ages of 1-6, 7, 8 and 9 months. 79.7% of the respondents delivered in the government hospitals and 73.4% had received 6 weeks post-partum mothers and infants check up. 73.4% fed their infants just breast milk and water in the first six months. 83.5% of children were vaccinated as a Thai MOPH requirement. The maternal and child health care working in the ethnic group are worthy of recognition. Thus, the government should continue to increase funding in these areas to promote the complete enhancement of the maternal and child health care system.

Keywords: Maternal and Child Health, Ethnic Group, Thailand

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**PERCEIVE OF VULNERABILITY AMONG HIGH RISK PREGNANT MOTHER  
WHO REFUSE REFFERED TO THE HEALTH FACILITY IN PAITON,  
PROBOLINGGO, INDONESIA**

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**ABSTRACT**

The most important strategy to prevent maternal mortality is early detection high risk pregnancy and prompt treatment. This study aimed to explore the perceive of vulnerability among high risk pregnant mothers who refuse to referred to the health facility. This is a qualitative study conducted on April 2017 in Paiton, Probolinggo, Indonesia. The respondents are head of public health center (PHC), 2 midwives as key informants and 2 high risk pregnant mothers who refuse to referred to the health facility. Data were collected by in depth interview and validated using triangulation. Head of PHC is told by mothers that they afraid if their acceptance to be referred to hospital could be a bad signal such as they are delivered home dead or fatal conditions. They belief that refusing is the best effort for their life. Both midwives feel that their condition as high risk pregnant mothers based on the referred standard but mothers still go to other midwife to get second opinion. High risk pregnant mothers say that they are still in a healthy condition and their high risk pregnancy can't give effect to their life, moreover kill them. So, they persists because she find her neighbor can deliver normally even she had high risk pregnancy and she can't handle it if her baby need formula milk. The second mother has a busy husband that can't drive her to hospital, different perception about hospital choice and perception about delivery baby in hospital only needed by a pregnant mother who got fatal conditions.

Keywords: Maternal Mortality, High Risk Pregnant Mother, Perceive of Vulnerability



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**CLIENT SATISFACTION WITH MATERNAL AND CHILD HEALTH CARE  
SERVICES AT A PUBLIC SPECIALIST HOSPITAL IN A NIGERIAN PROVINCE**

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**ABSTRACT**

**Objective:** The level of service satisfaction of a client determines further utilization and recommendations to others. Thus, this study assessed client satisfaction with Maternal, New-born and Child Health (MNCH) services provided at the Mother and Child Hospital, in Ondo State, Nigeria.

**Methods:** This is a descriptive study carried out during July and August 2012 among 321 respondents. Data were collected using an interviewer-administered questionnaire at selected clinics in the hospital. Proportionate sampling was used to determine the total number of clients to be selected from each clinic. **Results:** Most of the respondents were generally satisfied with the services at the hospital with a majority (81.5%) rating the intrapartum service as the service they were most satisfied with. Overall, 62.5% of respondents were very satisfied with services provided by the hospital. Patient expectations, facility structures/equipment and healthcare providers' attitude and the educational level of clients were found to be statistically associated with clients' satisfaction ( $p < 0.05$ ).

**Conclusion:** The overall satisfaction with services at the facility was 62.6%. The satisfaction level was higher among illiterate patients, who had no costs for transportation and those who had high expectation while coming to the hospital.

**Keywords:** Expectation, Client, Satisfaction

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## **BARRIERS FACED BY HEALTH PROVIDERS AND WOMEN IN POST-ABORTION CONTRACEPTION CARE: A QUALITATIVE STUDY**

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### **ABSTRACT**

Post-abortion contraception provides an opportunity to decrease incidence of unintended pregnancies and to break the chain of repeated abortions. (1) High levels of unintended pregnancies lead to unsafe abortions which result in high maternal morbidity and mortality globally. WHO (2008) estimates indicate that unsafe abortions lead to 13% of maternal mortality across the world and developing countries share 95 % of it. (2) In 2012, approximately 9 million pregnancies occurred in Pakistan; about 54% ended up in abortion (2). Nearly 890,000 abortions took place in Pakistan. Around 200,000 women admitted in to the health facilities for management of post abortion complication (3). An exploratory study was conducted in public sector health facility and peri-urban communities of Islamabad, Pakistan. The study followed a qualitative approach to explore barriers faced by women who had experienced abortions in seeking post-abortion contraception. Purposive and snow ball sampling was done. IDI and FGDs were conducted to collect data. The main theme identified was, “Failure of Post-abortion care (PAC) service delivery in tertiary care public hospital in capital, Islamabad”. The sub themes contributing to the main theme were perception of abortion and post-abortion care (package) among health providers, social barriers to PAC and failure of healthy pregnancy and spacing. There is pressing need to policy reform regarding post-abortion care to capture the opportunity to reduce unintended pregnancies by providing post-abortion contraception to women. The study identified that well trained and adequate staffing, coordination of Obstetrics &Gynecology department and Family planning unit, with specialized setup for post-abortion care are vital. Provision of information and counselling of couples need to be provided with respect and dignity to increase up take and compliance of post-abortion contraception.

**Keywords:** Post-Abortion Contraception, Barriers, Abortion

**CAN COMMUNITY MIDWIVES EFFECTIVELY INTEGRATE FAMILY  
PLANNING SERVICES IN THE COMMUNITY THROUGH SOCIAL FRANCHISE  
NETWORK? AN OBSERVATIONAL STUDY IN PERI-URBAN KARACHI,  
PAKISTAN**

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**ABSTRACT**

**Background:** Access, better counseling and quality in the provision of family planning services remain big challenges. Sukh Initiative (a project of three different foundations) is a multi-pronged approach, working in one million underserved population residing peri urban slums in Karachi and providing quality FP/RH services both at public and private health care facilities. For improving accesses an to a broad range of FP including post-partum and Post-abortion FP services Sukh working with public sector health facilities.

**Objective:** To assess the improvement in Long acting reversible contraceptive (LRAC) among MWRAs by improving access in peri-urban-underserved population of Karachi.

**Methodology:** Using prospective cohort study design, this study reports the family planning service data collected from Jan 2015- Dec 2016 at peri-urban slums in Karachi. 46 public health facilities including 9 Maternal and Child Health (MCH) Center), 20 Family Welfare (FW) Centers and 10 Dispensaries Initiated postpartum family planning PPFP & Post abortion care PAC services through the platform of Sukh Initiative. 85 government providers working in the anticipated facilities received training from Jhpiego team on Infection prevention and FP counselling. Impact application was used to calculate Preliminary analysis was done on excel and MSI impact application was used to calculate health and demographic impact.

**Results:** In 46 health facilities total 22,751 clients were served, from the 9 MCH centers 4,730 clients were counselled for Family Planning of which 55% adopted a modern family planning methods- LARC are the most common methods 35% chose (PPIUCD) and 55% Implants. 21,290 clients from 20 FWCs received counselling of which 81% adopted a modern family planning methods- 48% were condom users and 23% are combined contraceptive pill users. From the 10 upgraded dispensaries 1,773 clients received counselling for FP, 27 % adopted a modern FP method with the high use of implants i-e 46% and Injections-33%. Training on infection prevention showed a remarkable increase from 29%-71% during the year. An estimated 3,487 unintended pregnancies, 2270 live births, 587 abortions and 380 unsafe abortion have been averted. Economically through improving access we saved 150,659 direct health cost.

**Conclusion:** Improving access has the ability to promote and deliver high-quality family planning services, focusing on LARC, in an effective, equitable, and efficient manner.

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## MIGRANT HEALTH – A STUDY ON MORBIDITY STATUS, ADDICTIONS AND HEALTH SEEKING BEHAVIOUR OF MIGRANT WORKERS

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### **ABSTRACT**

**Methods** – This was a cross sectional study conducted at a major construction site in Thrissur district Kerala India. Data from 238 migrant construction workers in Thrissur, Kerala, India was collected using a pre tested questionnaire. Data was analysed using SPSS.

**Results** – A total of 238 male workers were included in the study. Headache was the most common morbidity 27.8 percent followed by acidity 20.1 percent and back ache in 18.9 percent. Among the addictions 50.4 percent of them were smokers while 81.5 percent were alcohol addicts and 18.1 percent addicted to cannabis. Only 2.1 percent visited a hospital while 4.2 percent visited doctors and 22.7 percent used to get medicines from medical shops. 22.7 respondents felt that language was an issue for treatment while 27.3 percent felt that their work timings were an important factor in not seeking medical treatment.

**Conclusion** – Migrants have a higher incidence of addictions as related to the rest of the population. Language barriers and work timings also influenced their health seeking behavior.

There is a need for addressing the health of migrant workers.

**Keywords:** Morbidity, Migrants, Addictions, Health Seeking Behavior, Kerala, India

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## EVALUATION OF “SIMPLE WEB” DEVELOPMENT BASED ON THE DeLone AND McLean MODEL

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### **ABSTRACT**

Evaluation of the Tuberculosis (TB) surveillance system in May 2015 found unsatisfactory data quality with mismatched or incomplete data entry. There was a need to validate the data reported by health facilities staff. Simple Web is a software that we developed to aid the collection, reporting and validation of data on TB patients seen in health centers and hospitals. The objective of the study was to evaluate the succes of Simple Web based on DeLone and McLean Model. The study was conducted at 30 of 37 health facilities in Gresik District, East Java. User satisfaction scores of Information System (IS) success factors based on the DeLone and McLean IS Success Model were utilized to evaluate IS performance after developed Simple Web was introduced. Data analysis was done by using Path Analyze, assisted by data processing software Lisrel 8.80 Student. The result showed that the development of Simple Web get positive appreciation from health facilities staff. The software was secure and easy to operate. The relationships among IS success factors were also analyzed to identify the important factors influencing. Information System has no significant relationship to Use and User Satisfaction. And, Service Quality and Quality System has significant relation to Use and User Satisfaction

Keywords: Information System, Simple Web, DeLone and McLean Model

## BIG DATA ANALYTICS AND CLOUD COMPUTING: A GAME CHANGER IN MANAGING PUBLIC HEALTH DATA

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### ABSTRACT

**Background:** Healthcare Industry is known to generate enormous amount of data for the purpose of record maintenance, compliance, regulatory standards, policy formulation and most importantly patient care. It is estimated that the amount of healthcare data will grow from 500 petabytes in 2012 to 25000 petabytes in 2020. Big Data Analytics and Cloud Computing can be seen as a boon to overcome the challenges of analyzing and storing these large data sets. **Objective:** To explore the opportunities, challenges, trends and market size of big data analytics and cloud computing in managing public health data. **Methodology:** The published literature from 2011 to 2016 related to the big data analytics and cloud computing in healthcare was collected from various research databases, archival or traditional library research, Newspapers, Blogs and eBooks. The SWOT method, PEST analysis, Porters 5 forces and Reverse Fishbone Diagram was used to categorized and analyze the collected data. **Result:** The result of the analysis evident big data analytics as the most promising tool to manage public health data and assist the healthcare professionals and program managers in identifying the patients at the risk for adverse outcomes, providing support in informed decisions-making, identifying treatments, programs and processes that do not demonstrate results or cost too much, identify institutional or professional inefficiencies or frauds and many more. On the other hand, cloud computing reduces the technology and treatment cost and provides quick access to data from any location having internet connection. Along with the benefits, the result also indicated few challenges such as; legal framework, standardization of data analytics methods, high capital requirement, resistance of end users towards the technology etc. **Conclusion:** Big data analytics and cloud computing has the potential to become a game changer but it require commitment of the end user and continuous research to develop simple solutions in managing healthcare data.

**Keywords:** Big Data, Analytics, Cloud Computing, Healthcare, Health Data, Health Information

C15

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**SCALED UP HEALTH WORKFORCE AND INTENSIFIED MOBILE HEALTH  
CAMPS IN HARD-TO-REACH POCKETS: CONTRIBUTING TO REDUCED  
SEVERE MALARIA IN BANGLADESH**

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**ABSTRACT**

Malaria is endemic in 13 bordering districts of Bangladesh having 17.52 million populations at risk. About 90% of malaria cases reported from three Chittagong Hill Tract (CHT) districts, are highly endemic constitutes a remote, hilly and forested geographical area with difficult communication. To bring malaria services to them, BRAC initiated a community-based approach in partnership with the government. With the establishment of microscopic centres and recruitment of female service providers, diagnosis by rapid diagnostic test (RDT) microscopy and treatment of uncomplicated malaria cases have been extended to community door-steps and ensured early case management. Promotion of LLIN usage has also been enhanced which decreased man-vector contact and resulted in reduced incidence. However, severe malaria proportion among total malaria cases was >4% till 2013. But with the lessons from sudden upsurge in 2014, BRAC deployed part-time male service providers in hard-to-reach pockets of CHT districts in malaria peak season who manage cases at uncomplicated stage and boost the use of LLINs and early care seeking. BRAC also intensifies mobile health camps by regular staff who reach the difficult-to-access pockets with RDTs and drugs, and provide malaria services by staying with the local community for 2-4 days. These combined interventions increasingly contributed to case management (6%, 13% & 28% in 2014, 2015 and 2016 respectively) at early stage that resulted in 50% reduction in proportion (4% in 2014 to 2% in 2016) of severe malaria (with 68% reduction in severe cases- from 2,063 in 2014 to 670 in 2016) of the country.

Keywords: Malaria, Severe Case, Scale Up, Mobile Health Camp, Hard-To-Reach, Difficult-To-Access

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## **DIGITIZING SERVICE DELIVERY PROCESS OF GOVERNMENT HEALTH WORKERS IN BANGLADESH: A JOURNEY TOWARDS COMPREHENSIVE eMIS**

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### **ABSTRACT**

Availability of reliable and timely data is crucial for a responsive public health care delivery system. Bangladesh is increasing investments for digital innovations in health and is creating an elaborate health information systems gradually. To continue the achievements in Millennium Development Goals (MDGs) era and moving forward with Sustainable Development Goals (SDGs), it requires tracking health related indicators especially for vulnerable and disadvantaged segments that necessitates the development of a robust health information system. Electronic Management Information System (eMIS), a collaborative initiative of four USAID supported partners is providing support to the government in Bangladesh for digitizing health service deliveries by the first-line health workers with aim to make routine health estimates are readily available and accessible for decision making. eMIS solutions allow tracking of every individuals across continuum of care at different service delivery points. Integrated systems for community and facility-based service deliveries are expected to reduce workload burden and eliminate possible data duplications. The tools also include electronic supervision and monitoring systems for supervisors and managers to ensure effective supervision, maintain data quality, and promote data-driven decision making. Implementation experiences of eMIS initiative in 2 districts (of approximately six million population) demonstrate how health information needs can be fulfilled from routine sources in a densely populated and resource poor setting with pluralistic and bifurcated health care system. Full potential of this initiative can be achieved through nationwide scale up which will eventually support the achievement of the Sustainable Development Goal 3 in the country.

**Keywords:** mHealth, Health Information System, eMIS, Digitization, Bangladesh, SDG



G1

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**PREVALENCE, KNOWLEDGE, ATTITUDE AND PRACTICE TOWARDS  
ELECTRONIC CIGARETTE AMONG UNDERGRADUATE STUDENTS IN USIM**

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**ABSTRACT**

Electronic cigarette (E-cig) or famously known as “Vape” is one of the tobacco harm reduction (THR) product. It is basically an electrical device which “consist of battery, an electrical heating element (atomizer) and a replaceable or refillable cartridge with liquid.” There are ongoing debates regarding the benefits and harmful effects posed by E-cig, especially towards the younger generation. Although the users believe that E-cig helps them to overcome their smoking addiction, the long-term effects are still inconclusive. The objective of this study is to determine the prevalence, knowledge, attitude and practice towards electronic cigarette among undergraduate students in a public Islamic university. A cross-sectional study was conducted among 484 students of Universiti Sains Islam Malaysia (USIM), in Negeri Sembilan, Malaysia between February to April 2017. Simple random sampling method was used to select participant among undergraduate students in USIM. Face-to-face interviews were done using validated self-constructed questionnaire. The majority of the respondents 344 (71.1%) were female. The prevalence of smoking among the respondents was 32 (6.6%) and about 9 (1.9%) of the respondents used electronic cigarette. There were significant association between gender, household income and smoking status with attitude and practice score. There was also significant correlation seen between attitude and practice score. It is hoped that with good knowledge, attitude and practice, the prevalence of electronic cigarette users can be reduced.

Keywords: KAP, Vape, Electronic Cigarette, Undergraduate, USIM

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## THE ECONOMIC IMPACT OF SMOKING CONTROL: AN APPROACH OF DYNAMIC GENERAL EQUILIBRIUM

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### **ABSTRACT**

Smoking control has been a controversial policy in many countries while its effectiveness is difficult to be quantified from the supply side as industrial policy. The paper aims to investigate the economic impact of smoking control in Japan by using a recursive dynamic computable general equilibrium (CGE) model. We disaggregate Japan's 2011 input-output table into 15 sectors and employ the policy interventions on (1) additional consumption tax on tobacco sector and (2) capital-use subsidy on medical service sector (education category). The target is set as the consumption of tobacco to be steadily maintained to be less than 3% in 10<sup>th</sup> year after the launch of smoking control policy. The duration of the policy will be examined for their sustainability and tax revenue. The simulation results are expected to provide us the visualized information on changes of consumptions, output price and external trades, as well as the economic indicators such as the GDP growth and household welfare change. The implications made from the analysis may unfold the interconnections between health care service and tobacco consumption for effective assessment on policy review.

Keywords: Smoking Control, Tax, Dynamic CGE, Economic Impact, Tobacco, Health Service

G3

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## PREVENTION AND CONTROL OF MALARIA IN PERSPECTIVES PEOPLE OF NAULU TRIBE

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### **ABSTRACT**

Research shows malaria in the remote tribe is very high and contributes more than 50% incidence of malaria disease in India. The Naulu tribe is one of the isolated tribes in Seram Island of Maluku Province which is a malaria endemic area, but the incidence of malaria was reported to be very low. This study aims to describe the causes of low incidence of malarial disease in Naulu tribe in Seram Island Maluku Province. Research method is qualitative research with phenomenology design. Research subjects were Naulu tribe community, head of Dusun and managing malaria program at puskesmas which supervise area of Naulu people residence. To ensure that the people of Naulu tribe do not suffer from malaria microscopic examination of plasmodium against blood sample of research subjects. The results of microscopic examination of 100 informant showed only two informant were malaria positive. The results of microscopic examination of 100 samples showed only two samples were positive for malaria. The result of indepth interview got the habit of society to make efforts of prevention and self-treatment of malaria disease. This habit is gained from generation to generation from their predecessors. Prevention efforts in the form of repel mosquitoes using fumes from the dried skin of duku (*Lansium domesticum*), consuming bitter foods like papaya leaves, covering puddles of water. Treatment uses existing ingredients around the environment that are made independently of them by drinking boiled water of *sambiloto* (*Andrographis paniculata*) leaves, papaya leaves, or stem bark of pule (*Alstonia scholaris*).

Keywords: Malaria, Naulu Tribe, Prevention, Treatment

## THEORY OF PLANNED BEHAVIOUR (TPB) FOR SMOKING CESSATION: PSYCHOMETRIC PROPERTIES OF THE MALAY VERSION

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### ABSTRACT

**Introduction:** The TPB is a widely used framework in predicting the intention of smoking cessation among smokers. It is used to assess the attitude towards quitting, subjective norm and perceived behavioral control. At present, there is no Malay version of this questionnaire is available. The aim of this study is to evaluate the psychometric properties of the Malay translated version of TPB to predict intention to quit smoking.

**Method:** This was a cross-sectional study among 185 male smokers. The forward-backward procedure was applied in translating the questionnaire from English to Malay language by following the standard guidelines. The internal consistency and stability was assessed by Cronbach alpha and correlation. The exploratory factor analysis was performed to validate the psychometric properties of the questionnaire.

**Results:** The translated questionnaire had shown good internal consistency with total Cronbach alpha is 0.849. The test-retest revealed acceptable stability with Spearmen correlation ranging from low to moderate ( $r$  0.25-0.56;  $P < 0.001$ ). The principle axis factoring with oblique rotation yielded four factors as original version. However, two items were removed from this sample because of very low communalities and cross loading.

**Conclusion:** The current study provided psychometric evidence for an appropriate, reliable, and valid tool of TPB Malay version. This questionnaire could be applied in evaluating smoking cessation interventions in Malaysia.

**Keywords:** Theory of Planned Behavior, Smoking, Malay Language, Translation, Validation, Factor Analysis

H1

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**KNOWLEDGE AND FACTORS ASSOCIATED WITH KNOWLEDGE OF SODIUM  
INTAKE AMONG CHINESE HAW TRIBES IN CHIANG RAI PROVINCE,  
NORTHERN OF THAILAND**

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**ABSTRACT**

One - third of the global population has high blood pressure, which is a leading cause of death from cerebrovascular disease and heart disease. Sodium Intake associated with an increase in blood pressure levels in all races, including Hill Tribes. Chinese Haw Tribe has high sodium diet consumption, however, there is no documentation regarding knowledge to provide information for local government intervention. This study aimed to determine knowledge of sodium intake and associated risk factors among Chinese Haw Tribes resided in Mae Chan District, Chiang Rai Province, Northern Thailand. A cross-sectional study was conducted. 217 people aged at least 30 years were enrolled. The participants had a face-to-face interview. The majority of the participants were women (71.4%), aged between 45- 64 years old (50.7%), married (82.0%), and uneducated (79.7%). 85.3% of them consumed monosodium glutamate-only 17.5 % of them had knowledge scores above the cut-off (8 out of 15 scores). The mean score was 5.19(± 2.58 SD). Uneducated statistically associated with knowledge (p-value=0.026). Appropriate educational materials should be designed in regard to the context of Chinese Haw Tribes.

Keywords: Knowledge, Factors, Associated, Sodium intake, Chinese Haw tribes

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## VALIDITY OF HOUSEHOLD DIETARY DIVERSITY SCORE AS A MEASURE OF FOOD INSECURITY AMONG HOUSEHOLDS IN LUCENA CITY, QUEZON

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### **ABSTRACT**

Food security is a multifaceted issue experienced by nations, globally. A trend currently being explored in recent studies in measuring food security is the Dietary Diversity Score (DDS). Household Dietary Diversity Score (HDDS), which is a type of DDS, obtains a snapshot of the economic ability of a household, making it an effective indicator of food insecurity. The objective of this study is to assess the validity of the HDDS as a tool for measuring food insecurity using Household Food Insecurity Access Scale (HFIAS) and Household Mean Adequacy Ratio (HHMAR) as reference standards. Using HFIAS and HHMAR, at least 70% of the selected households in Lucena City were found to be food insecure. Using Spearman correlation, HDDS showed a positive correlation with HHMAR ( $r = 0.43$ ,  $p < 0.001$ ) and a negative correlation with HFIAS ( $r = -0.347$ ,  $p < 0.001$ ). Receiver Operating Curve (ROC) Analysis was done to determine the appropriate HDDS cut-off for identifying food insecure household. The areas under the curve (AUC) obtained (0.618, 0.70, 0.701, 0.743), classified HDDS as a “fair indicator” of food insecurity. HDDS of 6 was identified as the optimal score when evaluating food insecurity with consideration of sensitivity and specificity. In this study, HDDS was proven to be a valid measure of food insecurity. It shows the great potential of this quick assessment tool in identifying population at-risk, which is crucial in the design of timely and appropriate intervention to alleviate food insecurity and other nutrition and health-related problems which may arise from it.

H3

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**DIETARY SUPPLEMENT USE AND ITS EFFECT ON NUTRIENT INTAKES AND GROWTH AMONG TODDLERS IN CHINA**

A Zhao, H Li, W Zheng and Y Zhang

*School of Public Health, Peking University Health Science Center, China***ABSTRACT**

The prevalence of dietary supplement (DS) use is common among Chinese infants and toddlers, however whether it is appropriate or not is still unknown. This study intends to explore the prevalence and demographic-related predictors of DS use and to assess its effect on nutrient intakes and body growth among Chinese infants and toddlers. Multistage stratified random sampling method was applied to recruited 2485 children aged from 0-36 months. DS use was measured using 24-hour dietary recall and family records. Anthropometry including height and weight was performed. The overall 1-month prevalence of use DS was 84.8%, and related factors were age, maternal education, and city tier. DS users aged 12-23.9 months took more vitamin A, thiamin, riboflavin, niacin, vitamin C, iron and zinc; Users aged 24-36 months took more niacin, vitamin C, and vitamin E. For infants 6-11.9 months, DS decreased inadequate iron intake (47.6% in user to 44.9% in nonuser). For toddlers, DS decreased inadequate vitamin A and calcium intake, but increased excessive vitamin A and zinc intake. Users of vitamin A and vitamin D supplement had higher LAZ, lower WLZ and BMIAZ and less small head circumference. For calcium, users had higher LAZ, WAZ, HCAZ, lower BMIAZ, and less stunted and overweight. In conclusion, DS use is common among Chinese infants and toddlers. However, inadequate use of DS also exist. DS helps to achieve adequacy for some nutrients, but excessive intake risk should also be taken seriously, especially for vitamin A.

Keywords: Dietary Supplements, Nutrients Intake, Growth Indicators, Infants, Toddlers

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## NUTRITIONAL STATUS, DIETARY HABITS AND PHYSICAL ACTIVITY PREFERENCES OF MALAYSIAN MEDICAL STUDENTS

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### **ABSTRACT**

A healthy lifestyle comprising a good nutritional status and adequate physical activity is the key to optimum health. Medical students, as ambassadors of health promotion, are expected to be equipped with knowledge regarding healthy lifestyle. A cross sectional study was conducted among 159 medical students to assess their nutritional status and their level of physical activity in a private University in Malaysia. Anthropometric parameters, dietary habits (a 7-day dietary recall), and level of physical activity using the short version of the International Physical activity questionnaire(IPAQ) were measured. Around 16% of the students skipped breakfast daily and 42% consumed soda or energy drinks once a week. About 93% of female students and 100% male students did not meet the caloric intake recommendations.

It was found that 69.8% of students had normal BMI, 14.5% were underweight and 15.7% were obese. As for physical activity, 110(69.2%) of students were physically active. Among them, 10.5% were involved in vigorous activity, 20.7% in moderate activity, and 68.9% in light activity.

Training integrated within the curriculum to motivate students to adopt a healthy lifestyle can be instrumental in development of an attitude that would benefit these future doctors and their clients.

Keywords: Healthy Lifestyle, Physical Activity, Nutrition, Medical Students



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## DIETARY MACRONUTRIENT INTAKE AMONG SRI LANKAN RURAL FEMALE TYPE 2 DIABETICS AND NON-DIABETICS AND EFFECT TOWARDS THE GLYCEMIC CONTROL

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### ABSTRACT

To avoid diabetic complications, diabetic subjects follow diet control, insulin or oral hypoglycemic medication to maintain fasting blood sugar (FBS) levels <140 mg/dl. This study was conducted to compare the macronutrient intakes among female type 2 diabetic and non-diabetic (ND) subjects and to determine the effect of diet on the glycemic control. From a Sri Lankan rural female population 29 type 2 diabetes mellitus (T2DM) [43 ( $\pm 6$ ) years] and 29 non-diabetic [39 ( $\pm 5$ ) years] subjects were recruited. A validated food frequency questionnaire was administered. Daily macronutrient intake was calculated using “NutriSurvey for Windows” software. Mean FBS level of T2DM subjects were significantly higher compared to non-diabetic subjects [FBS<sub>ND</sub>= 86.0 ( $\pm 15.7$ ) mg/dl, FBS<sub>T2DM</sub>= 138.2 ( $\pm 53.3$ ) mg/dl, P=0.000]. Energy intake of T2DM population was significantly lower compared to non-diabetic subjects [T2DM=1478.6 ( $\pm 489.2$ ) kcal/day, ND=2032.3 ( $\pm 597.0$ ) kcal/day, P= 0.000]. Dietary protein [ND=51.5 ( $\pm 23.9$ ) g/day, T2DM=38.0 ( $\pm 20.0$ ) g/day, P=0.000], fat [ND=39.3 ( $\pm 14.3$ ) g/day, T2DM=29.9 ( $\pm 13.4$ ) g/day, P=0.000] and carbohydrate [ND=382.5 ( $\pm 111.8$ ) g/day, T2DM=270.8 ( $\pm 23.9$ ) g/day, P=0.000] intake levels were significantly higher in non-diabetic subjects. Fifty seven percent of T2DM subjects had FBS levels <140 mg/dl. FBS level of the whole population demonstrated weak negative significant correlations with daily energy intake (r= -0.223, P=0.044), dietary carbohydrate intake (r= -0.300, P=0.01) and protein intake (r= -0.219, P=0.048). T2DM subjects have maintained comparatively low energy intake by reducing daily dietary macronutrient intake and low calorie intake may have a positive effect towards maintaining the recommended FBS levels among this T2DM population to avoid complications associated with T2DM.

**Keywords:** Type 2 Diabetes Mellitus, Dietary Carbohydrate Intake, Dietary Protein Intake, Dietary Lipid Intake

**SUPPORT OF FAMILY HEALTH DAY FOR PROVIDING A WIDE RANGE OF  
CONTRACEPTIVES, INCLUDING LONG-ACTING REVERSIBLE  
CONTRACEPTIVES AND PERMANENT METHOD IN PERI-URBAN SLUMS OF  
KARACHI PAKISTAN- A HIGH IMPACT PRACTICE IN FAMILY PLANNING  
SERVICE DELIVERY**

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**ABSTRACT**

**Background:** Low utilization of family planning services, particularly in areas of low contraceptive prevalence, high unmet need areas where geographic, economic, or social barriers limit-service uptake. Sukh Initiative (a project of three different foundations) is a multi-pronged approach, working in one million underserved population residing peri urban slums in Karachi and providing quality FP/RH services both at public and private health care. In collaboration with government, Sukh launched a Family Health day concept, which address inequities in access to family planning services and focuses to scaling up access to long acting reversible contraceptives (LARC).

**Objective:** To assess the provision of quality FP services especially long acting Contraceptive (LARCs) through Family Health Day

**Method:** In coordination with local government, we used their existing service delivery channel to organized camps named *Family Health Day* during Jan-Dec 2016. Multiple camps have been carried out under the purview of the Jhpiego team at various family planning service delivery points- MNCH and PWD centers and Dispensaries. Team consist of 1 or 2 dedicated providers of lower-level cadres, provides implants and other contraceptive methods to clients, Community health worker and driver facilitate women to reach the camp.

**Results:** During the year of the project 108 FHDs were held at 10 FWCs and 18 PWD facilities. 479 clients opted modern contraceptive methods of which 295 were LARC (long term reversible contraceptive) and 184 SARC (Short term reversible contraceptive). Few camps created a high impact in the community- 248 FP users have been made of this 214 LARC users, through this intervention an estimated 100 unintended pregnancies, 65 live births, 17 abortions and 11 unsafe abortion have been averted. Moreover it created an economic impact- 4,311 direct health expenditure on each MWRA was saved.

**Conclusion:** Family Health Day is an effective and acceptable way of increasing provision of long-acting and permanent methods this innovative approach that has been adopted and scaled up in 10 districts all over Pakistan.

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## WHO MADE THEM WHO THEY ARE: AUXILIARY MIDWIVES IN PROVIDING MATERNAL AND CHILD HEALTH CARE IN HARD TO REACH AREAS OF MYANMAR

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### ABSTRACT

Myanmar has alarming maternal and child health indicators with maternal mortality ratio of 282 per 10,000 live births and infant mortality rate of 62 per 1000 live births. In rural areas where 70 percent of the population lives, home birth is a common practice. Auxiliary Midwives are unpaid volunteers trained and deployed by the health system to serve the community with maternal and child health care. The objective of the study is to understand the barriers and facilitators towards providing maternal and child health services by Auxiliary Midwives in Myanmar. A qualitative research study was conducted in Ngape Township, Magwe Region from July 2015 to February 2016. Twelve key informant interviews and 15 focus group discussions were conducted. Auxiliary Midwives were considered as essential volunteers especially in hard to reach villages. To make the community believe and trust in them, the system chose the same uniform as the skilled Midwives. They were also strictly restricted to injection practice and providing some of the essential medicine needed to saving lives at birth. Despite the fact that AMW practices are restricted to health promotion activities and performing normal deliveries, they were perceived by the community as being as skilled as a MW. Working between the demand of the community and restrictions of the health system was considered as a challenge. Breaking the restrictions in times of emergency also faces many thought-provoking issues working in hard to reach areas. Auxiliary Midwives roles and responsibilities need urgent revision by the health system.

Keywords: Auxiliary Midwives, Maternal and Child health, Health System, Myanmar

## IMPROVING PROCESSES AND OUTCOME OF MATERNAL HEALTH REFERRALS AT THE DISTRICT LEVEL: THE ROLE OF AN ENHANCED INTER-FACILITY REFERRAL COMMUNICATION SYSTEM

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### ABSTRACT

The urgency and unpredictability of obstetric emergencies necessitate a strong referral system to higher centers where these can be well managed for good outcomes. An efficient inter-facility communication system enhances the referral process and improves outcomes. The aim of the study will be to assess the role of an enhanced inter-facility referral communication system on the processes and outcomes of maternal health referrals in the Greater Accra region of Ghana. It will be conducted in three districts of the Greater Accra region using mixed methods approach: structured questionnaires for the quantitative aspect and focus group discussions, in-depth interviews and non-participant observations for the qualitative part. Over a seven month period, all maternal referrals to the district referral facility will be assessed for the processes and outcomes of referral both for the mother and neonates. The first 4 months of data will form the baseline (before intervention). The intervention package consists of training, provision of communication tools, formation of facility level referral teams and strengthening inter-facility feedback mechanisms, and will be rolled out in the last 3 months in all 3 districts and evaluated over the period (after intervention). We will document the referral processes including, indications for referrals and inter-facility referral communication and how these compare to the national referral policy guidelines. Risks of secondary complications amongst maternal referrals will be estimated before and after the introduction of the intervention package.

Keywords: Maternal, Referrals, Processes, Outcome, Enhanced Inter-Facility Communication

**IMPROVING ACCESS LEADS TO POTENTIAL SAVINGS WITH INCREASED  
USE OF LONG-ACTING REVERSIBLE CONTRACEPTION AMONG MARRIED  
WOMEN WITH REPRODUCTIVE AGE RESIDING IN PERI URBAN-  
UNDERSERVED AREAS OF KARACHI**

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**ABSTRACT**

**Background:** Access, better counseling and quality in the provision of family planning services remain big challenges. Sukh Initiative (a project of three different foundations) is a multi-pronged approach, working in one million underserved population residing peri urban slums in Karachi and providing quality FP/RH services both at public and private health care facilities. For improving accesses an to a broad range of FP including post-partum and Post-abortion FP services Sukh working with public sector health facilities.

**Objective:** To assess the improvement in Long acting reversible contraceptive (LRAC) among MWRAs by improving access in peri-urban-underserved population of Karachi.

**Methodology:** Using prospective cohort study design, this study reports the family planning service data collected from Jan 2015- Dec 2016 at peri-urban slums in Karachi. 46 public health facilities including 9 Maternal and Child Health (MCH) Center), 20 Family Welfare (FW) Centers and 10 Dispensaries Initiated postpartum family planning PPF & Post abortion care PAC services through the platform of Sukh Initiative. 85 government providers working in the anticipated facilities received training from Jhpiego team on Infection prevention and FP counselling. Impact application was used to calculate Preliminary analysis was done on excel and MSI impact application was used to calculate health and demographic impact.

**Results:** in 46 health facilities total 22,751 clients were served, from the 9 MCH centers 4,730 clients were counselled for Family Planning of which 55% adopted a modern family planning methods- LARC are the most common methods 35% chose (PPIUCD) and 55% Implants. 21,290 clients from 20 FWCs received counselling of which 81% adopted a modern family planning methods- 48% were condom users and 23% are combined contraceptive pill users. From the 10 upgraded dispensaries 1,773 clients received counselling for FP, 27 % adopted a modern FP method with the high use of implants i-e 46% and Injections-33%. Training on infection prevention showed a remarkable increase from 29%-71% during the year. An estimated 3,487 unintended pregnancies, 2270 live births, 587 abortions and 380 unsafe abortion have been averted. Economically through improving access we saved 150,659 direct health cost.

**Conclusion:** Improving access has the ability to promote and deliver high-quality family planning services, focusing on LARC, in an effective, equitable, and efficient manner.

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## IDENTIFYING DETERMINANTS OF CERVICAL CANCER SCREENING AND TREATMENT BEHAVIOURS OF WOMEN IN SOUTH-EAST NIGERIA

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### **ABSTRACT**

This is a cross-sectional study of women in rural and urban settings in South-Eastern Nigeria accessing cervical cancer screening through the use of Visual Inspection with Acetic acid and those who received preventive treatment with cryotherapy and referral for advanced treatment. The focus was on identifying, factors influencing screening or treatment uptake and completion of referrals or refusal of these services. Both quantitative and qualitative approaches were employed in the study design. Quantitative data on screening, referral for preventive and advanced treatment (where recommended) and demographics of women presenting for treatment (n=500) between the ages of 20-80 years on a screening and treatment program between 2012 and 2016 were obtained and analyzed using SPSS. Qualitative data was obtained through in-depth interviews with randomly selected service providers and women screened and referred for treatment services who either received or refused the service who consented to be interviewed. Factors affecting screening uptake include being informed about the risks of cervical cancer during a clinic visit for a different service while factors for refusal of screening services include the provider being male. Reasons given for incomplete referrals include costs of transportation to treatment center and religious beliefs. Identification of these factors gives further insight into behaviors towards cervical cancer screening and treatment services and their determinants and supports the development of strategies to improve uptake and overcome barriers associated with their uptake in Nigeria and sub-Saharan Africa as a whole.

Keywords: Cross-Sectional, Nigeria, Cervical Cancer, Screening, Treatment

K1

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**ASSESSMENT OF KNOWLEDGE ABOUT AUTISM AMONG UNDERGRADUATE  
MEDICAL STUDENTS STUDYING IN DIFFERENT MEDICAL COLLEGES IN  
DHAKA BANGLADESH**

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**ABSTRACT**

Studies have reported variations of knowledge among healthcare professionals including medical students about autism. Global prevalence of autism is 11.3 per thousand children, 0.15 million people with autism in Bangladesh. The study assessed knowledge about autism among medical students. Cross sectional descriptive study among randomly selected 300 final year MBBS students of 7 medical colleges under Dhaka University. Self-administered 'Knowledge about childhood autism among health worker' (KCAHW) questionnaire was used which had 4 Domains. Domain i, 8 questions about impairments in social interaction, highest score 8; Domain ii, 1 question about communication and language development with highest score 1, Domain iii, 4 questions about obsessive compulsive pattern of behavior and highest score 4. Domain iv, 6 questions about co-morbidities of autism with highest score 6, the lowest score of each Domain was 0. Data was analyzed through SPSS, knowledge score was analyzed through descriptive statistics, and association of knowledge with gender and previous exposure with children with autism was seen by chi-square test. Results presented through tables and graphs. The mean age of the respondents was 23.19±0.90 years. Total mean knowledge score of all the 4 Domains was 12.92±3.24 among 19. The mean knowledge score of Domain i was 6.34±1.73, Domain ii 0.79±0.40, Domain iii 2.3±1.25 and Domain iv, 3.47±1.51. Female respondents scored the highest in each Domain. There was significant association between knowledge score and previous experience of managing children with autism. The main source of knowledge was television, newspaper and internet. Knowledge deficit was evident about autism.

Keywords: Autism, Communication, CO-Morbidity, Healthcare Professional, Knowledge, Social Interaction

K2

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## STUDENT'S PERCEPTION ON HEALTH AND SCHOOL HEALTH: A QUALITATIVE STUDY

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### **ABSTRACT**

Promoting health to school is activities to build school community having optimal health status. Those activities will be optimal if the member of school has had good knowledge, perception and high motivation on health. The understanding on health concept will influence individual to gain healthy activities. In the school setting, this literacy is very important to build healthy school. This study is to explore student's understanding, perception and motivation on health and to implement school health. This qualitative study used focus group discussion to collect data. Five FGDs has been conducted on five groups of 4<sup>th</sup> to 6<sup>th</sup> grader students in Surabaya District, East Java, Indonesia. Those five groups were organized from five sub district in Surabaya District. Study showed that students have understood health identical to a physical health. Schools that have a clean, tidy and green environment surrounding, was perceived as a healthy school. Most of students have had willingness to implement and reach school health program at their school. The result of study implies that health education through school health program was needed to member of school, especially for students.

Keywords: Understanding, Perception, Motivation, Students, Health Concept, School Health



K3

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## WATER SUPPLY AND SANITATION EFFECTS ON SCHOOL SURVIVAL: EVIDENCE FROM THE PHILIPPINES

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### **ABSTRACT**

Relatively little is known about the indirect effects of water and sanitation conditions on child development in low- and middle-income countries. In particular the risk to child schooling posed by exposure to inadequate water supply and sanitation during early childhood. This study conducted a survival analysis to investigate school dropout among children aged 8 - 21 years old in the Philippines using the Cebu Longitudinal Health and Nutrition Survey. Employing multilevel, discrete-time models, which allow for clustering among children from the same *barangay* or district, the association between unimproved water sources and sanitation at birth and the failure to enrol in school was estimated. The results showed that children from households whose primary source of water is deficient when they are born have a higher probability of school dropout. There was also evidence of community-level variation in the probability of enrolment failure. No significant sanitation effects were found. These findings suggest that environmental risk factors in early years could have a considerable impact on subsequent development, which has implications for wider social and health objectives.

Keywords: Philippines, Water, Sanitation, Schooling, Multilevel Survival

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## WHOLE GRAIN CONSUMPTION AND ITS DETERMINANTS IN MALAYSIAN MEDICAL STUDENTS

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### **ABSTRACT**

Whole grain consumption is associated with several health benefits. Little is known however, about whole grain consumption patterns in Malaysia. The objective of this study was to assess whole grain intake pattern and its determinants amongst Malaysian medical students.

A cross sectional study investigating whole grain intake amongst 151 medical students in a private medical University in Malaysia was conducted over six months. A self-administered, validated questionnaire was used to assess sociodemographic variables, the whole grain intake pattern and the knowledge and attitudes towards whole grain intake.

The prevalence of reported whole grain intake in the past 3 months was 51%, with only a few with every day consumption. The main grain source of whole grain was oats while ready to eat breakfast cereals and hot cereals were the main food contributors. Chinese ethnicity, normal body mass index, readiness to adhere to Malaysian food pyramid and self-preparation of food and eating at home were significantly associated with whole grain consumption. However, education, knowledge and affordability, which are some of the primary determinants of food choice, did not seem to influence whole grain consumption.

Whole grain consumption is relatively low amongst Malaysian medical students. Cultural background and self-belief influence this practice despite being from the medical fraternity. Efforts are needed to bridge the knowledge – practice gap by assessing the barriers to whole grain consumption in order to design effective initiatives to promote an increase in whole grain consumption.

**Keywords:** Whole Grain Consumption, Medical Students, Practice

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## KNOWLEDGE OF TRAFFIC SIGNS AND THE OWNERSHIP OF A DRIVER'S LICENSE TO A MOTORCYCLE USER

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### **ABSTRACT**

Traffic accidents are affected by user factors of motorcycles, vehicles and the environment. Human factors (motorcycle users) affect the incidence of traffic accidents. This study aims to describe knowledge of motorcycle use and the ownership of a driver's license. The research method is cross sectional by comparing between people who have a history of accidents with motorcycle riders who do not have a history of accidents. Result of this research is students who come from High School of Surabaya a number of 24 students of motorcycle users. Age of respondents between 17 - 18 years with a mean of 17 years with Standard Deviation 0.2. The sexes were mostly male 13 (54.2%) while women were 11 (45.8%). High school students interviewed were 3 (12.5%) having an accident during the last 6 months. Accidents happen both leave school and go home from school. Students of 100% motorcycle riders have a driver's license (driver's license). The tests that followed included theoretical tests and practice tests. Some of them are just taking the theory test. Students who ride motorcycles either follow theoretical tests or test theoretical tests and practice mostly do not have traffic accidents. Students who experienced an accident 33.3% who repeat the test while who never had an accident there is no repeat test. Knowledge of traffic signs owned by motorcyclist students are mostly good but the knowledge about the ban signs has not been good.

Keywords: Traffic Accident, Driver's Licences, Knowledge of Traffic Sign

A13

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**ENVIRONMENTAL HEALTH IN MULYOREJO DISTRICT, SURABAYA CITY,  
INDONESIA**

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**ABSTRACT**

The case of diarrhea in Surabaya City in 2015 was 65,447 cases, with the area that had the highest case of diarrhea in Kalijudan Health Center, Mulyorejo Sub district (59.36%) and Mulyorejo District Health Center at 35.55% so it needs to be investigated environmental sanitation in Mulyorejo Sub-district, Surabaya City. The objective is to describe the environmental sanitation in district o Mulyorejo, Surabaya. A cross sectional study was conducted in Mulyorejo District, Surabaya City, East Java Indonesia with random sampling. Respondents were 298 residents spread in 6 urban villages in Mulyorejo Sub-district, Surabaya City. There were 23 people (7.7%) seeing defecate indiscriminately, 254 people (85.23%) using clean water, 153 people (51.34%) using new gallon drinking water (NGGW), 293 people (98.32 %) had a trash, 116 people (38.92%) there were flies in the house. There were 19 from 116 people (16.37%) who experienced diarrhea. The conclusion is there are people who still defecate indiscriminately, not all households are served by local water company, there are still families who do not have a trash, there are flies in the house, more than 10% of respondents have experienced diarrhea in the last 3 months. The need to improve environmental conditions and socialize the importance of defecation in a safe and healthy place.

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**ASSOCIATION HISTORICAL OF PESTICIDE EXPOSURE TO THE PRESENCE  
OF PESTICIDE METABOLITES IN THE URINE OF CHILDREN IN BREBES  
DISTRICT**

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***ABSTRACT***

Pesticides are toxic chemicals that can interfere health and the environment. Exposure to pesticides endangers human health because pesticide residues accumulate in agricultural products and the surrounding environment. Effects of pesticides on human health, especially children can affect the process of growth and development. The purpose of this study was to analyze the history of pesticide exposure in the presence of pesticide metabolites in the urine of children. Type of this study was observational analytic with cross sectional design. The independent variables were history of pesticide exposure and dependent variable, the presence of pesticide metabolite in child urine. Research subjects were elementary school students in Brebes region as many as 48 students, using total sampling in grade 4 students in 2 elementary schools of Bulakamba sub-district Data collection was done by interview, observation and urine metabolite examination. Chi square was used for data analysis. The results showed that there was a relationship between parent's job ( $p=0.023$ , OR = 3.053), children's involvement in agricultural activities ( $p=0.001$ , OR=4,400), student's habits of playing in agricultural area ( $p=0.002$ ; OR=4,583). The presence of pesticides in the home environment ( $p=0.013$ ; OR=3,536), drinking water source ( $p=0.008$ ; OR=8,400) in the presence of pesticide metabolites in students. Thus, there is a relationship between the history of exposure to pesticides with the presence of pesticide metabolites in the urine of students.

**Keywords:** History Of Exposure To Pesticides, Students, Agricultural Activities, Pesticide Metabolites

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**RELATIONSHIP BETWEEN KNOWLEDGE AND ATTITUDES WITH ACTIONS  
IN REDUCING PLASTIC BAGS USAGE AMONG FRIED FOOD SELLERS IN  
MANADO, 2012**

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**ABSTRACT**

In Manado plastic bag was the first option of fried food seller for packaging. However, the sellers did not understand the impact of their behaviour when they put hot fried food in the plastic bag. This study was conducted to determine the relationship between knowledge and attitudes with actions in reducing plastic bags usage among fried food sellers. This was an analytic survey using cross sectional study. The study population was fried food seller with 70 samples. Samples were determined by purposive sampling. Data were collected using questionnaires with interview method. Relationship between variables were analysed using spearman rank test at the level of confidence = 95% and  $\alpha = 0.05$ . The results showed that majority of sellers (50%) had a good knowledge about the impact of plastic bags usage, 45.7% had moderate and 4.3% had poor knowledge. Most of sellers (87.1%) had good attitude, 10% had moderate attitude and 2.9% had poor attitude in reducing plastic bags usage. Most of sellers (55.7%) had no action, 30% had moderate action and 14.3% had good action in reducing plastic bags usage. There was no relationship between knowledge and action among fried food sellers ( $p = 0.308$ ) and there was no relationship between attitudes and actions among fried food sellers ( $p = 0.803$ ). Cooling the food before selling and using banana leaves to replace plastic bags were recommended to reduce plastic bags usage among fried food sellers. People were suggested to bring a safe food container when they bought fried food.

Keywords: Knowledge, Attitude, Action, Fried Food Sellers, Plastic Bags

## THE EFFECT OF DIFFERENT EXERCISE PROGRAMS ON BONE MINERAL DENSITY AND PHYSICAL FUNCTION IN WOMEN WITH OSTEOPOROSIS: A RANDOMIZED CONTROLLED TRIAL

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### ABSTRACT

Osteoporosis is a multifactorial progressive skeletal disorder characterized by reduced bone mass. Exercise is widely recommended to reduce osteoporosis, falls and related fragility fractures. The purpose of this study was to investigate the effects of land exercise (LE) and aquatic exercise (AE) on physical function and bone mineral density (BMD). Fifty-eight postmenopausal women, aged 50-70 years, diagnosed with osteoporosis according to BMD measures, enrolled in this study. The subjects were randomly assigned to either the intervention group (LE group) or the control group (AE group). Physical function and BMD were assessed in all subjects in both groups before and after 10 months of intervention. The muscle strength, flexibility, balance, gait time and pain were measured to assess physical function. Bone mineral density at the lumbar spine was measured by dual energy X-ray absorptiometry (DEXA). There were no significant differences between the two groups in the baseline anthropometric data. The two groups were similar with respect to age, weight, height, and body mass index ( $p>0.05$ ). After the exercise program, muscle strength, flexibility, gait time, pain, and bone density ( $p<0.001$ ) significantly improved with LE compared to AE. There was no significant difference between the two groups in balance at the 10-month follow-up.

Significant improvements in physical function and BMD suggest that LE is a possible alternative for postmenopausal women with OP. In the current available literature there is insufficient data regarding combined regimens, additionally, conclusions from our research can inspire further studies in order to promote land and water based exercise.

Keywords: Randomized Controlled Trial, Osteoporosis, Exercises, Women

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## IS THE RELATIONSHIP BETWEEN AGE AND UTILITARIAN WALKING INFLUENCED BY THE NEIGHBOURHOOD BUILT ENVIRONMENT?

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### ABSTRACT

**Background:** Neighbourhood built environments provide opportunities to incorporate walking for transport (WfT) into daily activities, contributing to overall physical activity. Within the same city, the relationship between age and WfT can vary across neighbourhoods, and the reasons for this variation are yet to be identified. This study investigates whether the neighbourhood built environment contributes to between-neighborhood variation in the age-WfT relationship.

**Methods:** This investigation used 2007 data from How Areas in Brisbane Influence Health and Activity (HABITAT) Study. The sample included 11,035 residents aged 40-65 years living in 200 neighborhood s in Brisbane, Australia. Self-reported minutes per week of WfR were categorised into none (0mins) and some (1-840mins). Objectively assessed neighbourhood level measures included residential density, street connectivity and land-use mix. Data were analysed using multilevel binomial logistic regression, adjusted for neighborhood self-selection, gender, socio-economic position and neighborhood disadvantage.

**Results:** On average, older groups were less likely to do WfT. The age-WfT relationship varied significantly across neighborhood s and the variation was larger in the older groups. Residential density and street connectivity moderately explained the between-neighborhood variation in the age-WfT relationship. These reductions were not observed for land-use mix.

**Conclusions:** Neighbourhood-level factors differentially influence the WfT behaviors of young and old individuals, with older groups being more sensitive. Residential density and street connectivity moderately contributed to the between-neighbourhood variation in the age-WfT relationship in Brisbane, while land-use mix did not. This research can inform the tailoring of multilevel interventions that increase WfT for all age groups everywhere, supporting healthy aging.

**Keywords:** Built Environment, Healthy Ageing, Utilitarian Walking, Neighbourhoods



**QUALITY OF LIFE OF CEREBRAL PALSY PATIENTS AND THEIR  
CAREGIVERS: A CROSS SECTIONAL STUDY IN A REHABILITATION CENTER  
KHARTOUM-SUDAN (2014 – 2015)**

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**ABSTRACT**

**Background:** Cerebral palsy (CP) is group of disorders characterized by long term disabilities that affects the (Quality of Life) QoL of both patients and those caring for them. **Objective:** The objective of this study was to measure the QoL of cerebral palsy patients and their caregivers and determine the factors affecting both of them. **Methods:** This was a cross-sectional facility based study. 65 caregivers of children with CP aged 4-18 years completed a self-structured questionnaire. Descriptive of the samples were displayed and logistic regression was used in the analysis. **Results:** The scores of overall QoL of both children and caregivers were *low*, however variations were observed among different domains. Both health-related and socio-demographic factors were found to affect the QoL of children and caregivers. Increase in *disability* and presence of *complications* decreased the children QoL, while the availability of *health insurance* improved it. While the QoL of the caregiver was affected by his/her *occupation*, the degree of child *disability* didn't affect it. **Conclusion:** This study showed that many feasible changes can be adopted to improve the QoL of CP patients and their caregivers.

Keywords: Cerebral palsy, Quality of life, caregivers, Sudan

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## IDENTIFYING THE KNOWLEDGE, ATTITUDES AND NEEDS OF DISABLED INDIVIDUALS IN ISTANBUL PROVINCE TOWARDS DISASTERS AND EMERGENCIES

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### **ABSTRACT**

As Istanbul is one of the most populated provinces all around the world, it has a very risky status in terms of all disasters and emergencies. Furthermore, the largest population of disabled individuals in Turkey reside in Istanbul province with a prevalence rate of 13.3% according to a countrywide research conducted in 2002. Thus, in the light of this information, our aim was to determine the knowledge, attitudes, practices, environmental properties, needs and level of awareness among disabled individuals in Istanbul towards probable disasters and emergencies. We conducted our study through nongovernmental organizations among individuals over 18 years of age with six main types of disabilities and/or impairments: Vision disability, hearing disability, cognitive disability, physical disability, chronic disability, language and speech disability. In the study, our tool was a common 5-part questionnaire investigating individuals' sociodemographic features, residential properties, knowledge-attitude-practice, needs and awareness in terms of probable disasters and emergencies in Istanbul province. As a result, taking "primary prevention" principle of public health into account, it is essential to take necessary measures for disabled individuals prior to probable disasters and emergencies. Disaster and evacuation plans must be prepared properly and also appropriate policies should be developed for all, taking the disabled people into consideration as vulnerable groups amongst the communities.

**Keywords:** Disabled, Disability, Disaster, Emergency, Impairment

**COMMUNITY OWNERSHIP AND PARTICIPATION IN DELIVERANCE OF  
HEALTH CARE SERVICES THROUGH VILLAGE HEALTH, SANITATION AND  
NUTRITION COMMITTEES (VHSNCS) IN TRIBAL AND NON TRIBAL AREAS  
IN A DISTRICT OF RAJASTHAN ,INDIA**

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**ABSTRACT**

People must have ownership and control on the services through their participation in over all process from planning to delivery of services . The government of India introduced VHSNCs at the village level with a sanctioned annual revolving fund for a three way partnership between Health System, the community and community based organizations. Objectives: to assess the extent of community ownership and participation in formation and functioning of the VHSNCs , compare it between tribal and non tribal areas , to identify the barriers and measures to overcome them . Methodology: cross sectional study carried out over six months in 2013 in Udaipur district, Rajasthan . 20 tribal and 10 non tribal VHSNCs were selected by multi stage random sampling. 60 consenting community members were interviewed using pretested semi-structured schedule and Records reviewed . Data analysed with SPSS version 16. Mean and standard deviation were calculated, chi-square test was applied , significance attributed to p value  $\leq 0.05$  .RESULT: Only 16% VHSNC members were from community, 55% being women and only 19% were marginalized population. 85% were illiterate. None were formally trained. 30% lacked awareness of their responsibilities in VHSNC and 17% regarding utilization of revolving fund . 83% had never attended the monthly VHNCs meetings in last six months. CONCLUSION : Community participation and ownership was poor at both tribal and non tribal VHSNCs . illiteracy, ignorance, cultural restrictions and poor representation of marginalized population emerged as barriers. Community sensitization and building capacity of the community members can overcome them.

Keywords: VHSNC, Community Participation, Revolving Fund

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## EVALUATION CT DOSE INDEX FOR HEAD ON MULTIDETECTOR COMPUTED TOMOGRAPHY (MDCT) IN SURABAYA

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### **ABSTRACT**

The increasing use of medical radiation, especially in diagnostic Computed Tomography (CT) scanning has raised many concerns about the risk of associated radiation exposure in the population exposed to CT examination. The emergence of multislice CT or Multidetector CT (MDCT), with increased scanning speed and volume as well as higher spatial and temporal resolution, have significantly enhanced the diagnostic value of CT in many clinical applications. According to BAPETEN (Nuclear Energy Regulatory Agency of Indonesia) regulation, radiation safety of X-ray Radiology Diagnostic and Intervention must be tested. This test meet BAPETEN Chairman's Regulation No.9 year 2011 on Compliance Test for the X-ray Radiology Diagnostic. Purpose of this study is evaluates CT Dose Index (CTDI) for head of CT scanners at healthcare in Surabaya, Indonesia. This study used compliance test of CT scanners data for the years 2014 to 2016 from the Bureau of Healthcare Facility Inspection (BPFK), Ministry of Health Indonesia in Surabaya. Sample in this study was 19 MDCT scanners from hospitals in Surabaya that consisting of 2-4 slices 21.1% (n=4) , 8-16 slices 36.85 (n=7), and 64-128 slices (n= 8). According IAEA-BSS 115 on dose level guidance, permitted CTDI for head is 50 mGy. Measurement of average CTDI for head show technology 2-4 slices , 8-16 slice, and 64-128 slice were 61.7 mGy, 47.5 mGy, and 49. 6 mGy respectively.

Keywords: Computed Tomography, CT Dose Index, Multi Detector CT

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**SOCIOECONOMIC DETERMINANTS OF MATERNAL ANEMIA ; A  
DISAGGREGATED LEVEL ANALYSIS FROM ASSAM, INDIA**

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India*

**ABSTRACT**

This study examines socio-economic determinants that are associated with higher maternal mortality at disaggregated level in Assam, the state with highest maternal mortality ratio in India. An extensive door-to-door household survey was carried out during 2014-15 by using multistage sampling to select villages in Assam's many districts with larger number of reported maternal deaths. For verbal autopsy, snowball sampling was applied to identify the samples consist of currently pregnant women, mother with children 0-24 months and family members of death woman due to maternal causes. The study reveals that prevailing higher maternal mortality and maternal complications is the result of maternal anemia. Maternal complications are more likely to be associated with lower concentration of hemoglobin level which can be considered as a proxy of maternal anemia. In addition, the findings indicate that better concentration of hemoglobin level is positively related to income level, food expenditure and land ownership. This study further discusses the effects of iron bioavailability and dietary supplementation for long-term efficacy of iron status. The current work encourages identifying context specific determinants of maternal anemia for appropriate interventions in reducing of maternal mortality.

**Keywords:** Maternal Mortality, Maternal Anemia, Social Context, Dietary Supplementary, Iron Bioavailability, Assam

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**POLICY OPTIONS EVALUATION ON R&D INVESTMENT IN PUBLIC HEALTH:  
AN APPLICATION OF SPIAS-E**

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**ABSTRACT**

Confronting the hyper aging society with shrinking population in Japan, rapid development of information communication technology (ICT), internet of things (IoT) in the cyber system has contributed to social economic change nowadays while evaluating the effectiveness of policy options thus becomes an urgent task for stakeholders. In order to capture the structural change, we develop a recursive dynamic computable general equilibrium (CGE) model applying Japan's input-output table from 1995-2011 with the disaggregation of 95 sectors. In this model, the capital stock has been distinguished into tangible and intangible capital to better interpret the R&D capital formation and its spillover effect for technology realizations. The parameters and index are based on the patent and research paper database platform - SciREX Policy Intelligence Assistance System (SPIAS). We examine the public R&D investments on sectors of life science, ICT, materials, energy and others. The simulation results provide policy projections comparing the business as usual (BAU) path for 2015-2050 with various economic indicators such as real GDP, changes on labor service price, employment and the capital stock accumulation, etc. In public health industry like elder caring, hospitals and sanitation system, the rise of wage and capital price may be observed, together with the wage gap and pseudo-employment problems due to the substitute of labor force by technology improvement.

Keywords: Policy Evaluation, Dynamic CGE, Japan, R&D, SPIAS, Aging Society

## POLICY AND REGULATORY CONSIDERATIONS FOR ELECTRONIC HEALTH INFORMATION EXCHANGE (HIE) IN MALAYSIA

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### ABSTRACT

One of Malaysia's Telehealth strategies is to provide the lifelong digital health record, named as the Lifetime Health Record (LHR). This is achieved through an interoperable electronic health record (EHR), a secure consolidated record of an individual's health history and care, designed to facilitate authorized information sharing across the care continuum. Apart from managing this digital health evolution, it is important to put emphasis on the health data protection issues related to health information exchange (HIE). In this article, we share the insights on the policy and regulatory issues of HIE. We draw on literature review on policy and regulatory aspects of HIE and a workshop that was held in Putrajaya, Malaysia, for two days in November 2016, with 22 invited professionals and experts in legal and ethics in healthcare and personal data protection. Participants involved in three in-depth sessions, with focused questions on what is the proposed regulations and procedures to address the relevant risks and vulnerabilities in order to safeguard individual's data in HIE. Their responses were then analysed thematically to identify key themes, relating to the availability and suggested improvement of existing policies on HIE data protection. The experts stated that the need for a comprehensive and integrated individual medical record achieved through HIE is relevant. However, as these data are collected, processed, stored, and managed for information exchange, an issue arises as to whether the principles of confidentiality and personal data privacy would be applicable. It requires the use and IT-security concept practices, development of adequate strategies and vigilant monitoring to avoid security breaches. On top of that, the Malaysian legislator remains obliged to create a regulatory framework for the protection of patients' rights for HIE.

**Keywords:** Confidentiality, Ethics, Electronic Health Records, Health Information Exchange, Privacy, Telehealth

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## GOVERNMENT'S EXPENDITURE IN ERADICATION OF PULMONARY TB IN THE ERA OF HEALTH INSURANCE IN INDONESIA (CASE STUDY IN KEDIRI CITY, EAST JAVA)

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### ABSTRACT

Indonesia is a country with the second highest pulmonary tuberculosis (TB) cases in the world after India. The problem of TB is the concern of the Health sector at various policy levels. Kediri City, in East Java, experiences an increase of TB cases. Indonesia has also initiated a national health insurance program (JKN) since 2014. This research would like to study the expenditure of health sector which increases each year, whether it has also been well allocated for TB case eradication. The research design was an observational analytic study with *cross sectional* approach. The results of the analysis indicate that TB problems in Kediri City tend to increase, as indicated by the increasing of TB prevalence and the TB cases on child which increased significantly. The expenditure allocation of TB program decreased (in 2012 about US \$ 25,600 (US \$ 0.094 per capita, which from the government was 80.14% and in 2016 about US \$ 10,000 (US \$ 0.035 per capita, which from the government 78.27%). The use of these funds also seems to focus on meeting, socialization activities, purchasing reagents and consumables for sputum examination. The JKN Fund received by the *Puskesmas* (Public Health Center) is hardly allocated in the eradication of TB problems. This condition shows that it is necessary to improve the expenditure pattern especially on the aspect of the amount and the allocation of expenditure in order to achieve the success of eradicating TB cases in Regency of Kediri.

Keywords: Pulmonary TB, Government's Expenditure, National Health Insurance



## USE OF ELECTRONIC MEDICAL RECORDS FOR RESEARCH IN THE MANAGEMENT OF TYPE-2 DIABETES

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### ABSTRACT

There is a growing interest in using electronic medical records (EMRs) for research. This study describes a research project that uses an EMR database to estimate the resource utilization among patients with type2 diabetes (T2DM). Patients age of 18 and above who received any diabetes medication in 2013 were retrospectively identified from hospital information system (HIS) for three hospitals namely Ampang, Sungai Buloh and Serdang Hospital. Demographic characteristics, hospital visits, ancillary services utilization, antidiabetic agent (ADA) dispensed, and glycaemic measures were quantified. Data was extracted using structured query language (SQL) and descriptive statistical analyses were conducted using Stata software v12. From 269,458 patients visited outpatient department (OPD), 16,175 patients with T2DM were identified. Higher prevalence of T2DM was observed in males, age group 61-70 years old and amongst Indian ethnicity. Mean OPD visits for all three hospitals were 5 visits per year. On average, 17 laboratory tests done making pathology as the most ancillary services utilized. Metformin was the most frequently prescribed medication followed by sulphonylureas and intermediate acting insulin. Thirty per cent patients were on monotherapy and the same percentage was observed in dual therapy and insulin combination. The average cost for diabetes medication ranged from RM 191.21 to RM 252.28 per year. Majority of patients had at least one HbA1c test done over a year and less than quarter of patients achieved Malaysian glycaemic target of HbA1c <6.5%. This study adds valuable information regarding resource utilization for patients with T2DM in tertiary care hospital.

Keywords: Diabetes, T2DM, Resource Utilization, HIS, EMR

M1

[96]

## AN EXPLORATION OF JOB STRESSORS AND BURNOUT AMONG NURSING ASSISTANTS

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### ABSTRACT

**Research Objective:** Affected by the lower birth-decline and family dysfunctions, institutional long-term care facilities have become an option for many elderly populations in Taiwan. The standard nursing assistants-to-patients ratio is 1:5. However, there is rare study to explore nursing assistants' job stressor and burnout status. This study aims to examine the relationships between job stressor and job burnout, and the effect of job stressors on burnout for nursing assistants in Taiwan long-term care facilities.

**Study Design:** This is a cross-sectional study using structured-questionnaire with job stressors measured by C-JCQ, burnout measured by C-CBI, and background information. Descriptive analysis, Pearson correlation, and linear regression were applied to explore the relationships of variables and outcomes.

**Population Studied:** Data was retrieved from the "Survey of Nurse Assistants' Job Stress, Job Adjustment, and Health Outcomes in Long-Term Care Facilities in Taiwan."

**Principal Findings:** Nursing assistants who were younger ( $\beta=-0.19$ ,  $p<0.001$ ), foreign ( $\beta=-0.12$ ,  $p=0.05$ ), working in a longer operation years of facility ( $\beta=-0.18$ ,  $p<0.001$ ), working in a bigger facility ( $\beta=-0.22$ ,  $p<0.001$ ), lower psychological demands ( $\beta=-0.35$ ,  $p<0.001$ ), and higher social support ( $\beta=-0.13$ ,  $p=0.01$ ) were significantly associated with lower job burnout.

**Conclusions:** This study demonstrated that job stressors are influencing factors of nursing assistants' burnout.

**Implications for Policy or Practice:** Administrators of long-term care facilities should routinely monitor nursing assistants' job stressors and burnout, assist nursing assistants to alleviate the stress, build up a well mutual trust relationship, and provide the stress-relief techniques to reduce job stress and burnout to those high-risk nursing assistants.

**Keywords:** Long-Term Care Facilities, Nursing Assistant, Job Stressor, Burnout

M2

[97]

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**INTERNET ACTIVITIES, INTERNET ADDICTION AND ITS RELATIONSHIP  
WITH DEPRESSION: AN EMPIRICAL STUDY****K Udayai, V Pathak, N Aggarwal and D Chauhan***International Institute of Health Management Research, New Delhi, India***ABSTRACT**

In India, the internet penetration is around 31% with younger population being the major stakeholder. This penetration rate can be due to increasing addiction towards internet. Internet addiction is characterized by excessive or poorly controlled preoccupations, urges or behaviors regarding computer or phone use and internet access that lead to impairment or distress. Direct association can be found with problems like depression, stress, lower self-esteem and social isolation. This study has attempted to examine the relationship between internet addiction and depression. Furthermore, it has also tried to explore the links between internet activities and depression. A correlation survey design was employed. The study population comprised of college students and young professionals between the age group of 18-35 years. A sample size of 300 respondents was selected by means of convenience sampling from Delhi- NCR. To tap measures of internet activities, internet addiction and depression, scales developed by Weiser (IAS), Young (IAT) and Beck (BDI) were used. To assess the relationship between the studied variables, statistical tools such as Chi-square and Correlation were used. Using this study; we aim at contributing to the dearth of Indian literature available in this research area. Thereby the results of this study can be utilized in the development of future plans and interventional measures against the internet addiction epidemic.

**Keywords:** Depression, Gen-Y, Internet Activities, Internet Addiction

**MOBILE PHONE ADDICTION AND INCIDENCE OF SELF PERCEIVED  
HEADACHE AMONG 2<sup>nd</sup> AND 3<sup>rd</sup> YEAR UNDERGRADUATES IN UNIVERSITY  
OF SRI JAYEWARDENEPURA, SRI LANKA: CROSS- SECTIONAL STUDY**

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**ABSTRACT**

Compulsive and problematic mobile phone usage has become an emerging challenge to the public health worldwide. The aim of this study was to assess the mobile phone addiction level and self-perceived headache associated with mobile phone use among randomly selected 2<sup>nd</sup> and 3<sup>rd</sup> year university students (n=384) in University of Sri Jayewardenepura, Sri Lanka. The study was a descriptive cross sectional study which was conducted using a pre tested self-administered questionnaires to ascertain data related to mobile phone usage pattern and self perceived headache due to usage of mobile phones. A total of 83.1% (n=309) students were moderately addicted to their mobile phones while 5.1% (n=19) students were severely addicted. Females (6.7%) were more addicted to the device than males (1.7%) ( $P<0.05$ ). There were 21.5% (n=80) students who reported headache while using or within one hour after using the mobile phones. Severe mobile phone addiction level showed positive significant relationship with incidence of self perceived headache among study subjects ( $P<0.05$ ). Forty Four students indicated the quality of headache they experienced. 38.6% experienced unilateral headache at the side of mobile phone use. 18.2% students reported unilateral, burning type headache and 13.3% of study subjects mentioned that it was only burning type of headache and can't mention the definite place of it. Thus there is an urgent need to educate the public to depend less on the device and to take precautions during prolonged use.

**Keywords:** Mobile Phones, Addiction, Headache, Undergraduates

M4

[99]

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**ADJUSTMENT AS A PREDICTOR OF FRUSTRATION, STRESS AND SUICIDAL  
INTEND: A CROSS SECTIONAL STUDY AMONG HEALTH PROFESSIONAL  
STUDENTS**

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**ABSTRACT**

Health professional courses are recognized as a stressful and have remarkable adverse influence on the academic performance, physical health and psychological wellbeing. These courses demand high physical and mental ability and efforts. The huge amount of studying and related stress, and required continuous adjustment can at times be so frustrating as to raise a question for medicine as a career. Health professional students experience great anxiety, depression and frustration as compared to their counterparts in general education. They are at risk for suicidal tendencies also. Objective of the study is to assess the relationship between stress, adjustment, frustration and suicidal tendencies. 160 students of four different health professional courses were selected purposively from Wardha districts of Maharashtra, India. Stress scale, Beck's Suicidal intent scale, frustration test, and adjustment inventory were used for data collection. The result show that stress among health professional students are positively correlated with suicidal intent  $r = 0.330, p < 0.01$ , adjustment  $r = 0.499, p < 0.01$ , frustration  $r = 0.533, p < 0.01$ . There is positive relationship between suicidal intent with adjustment  $r = 0.170, p < 0.05$ . And frustration  $r = 0.194, p < 0.05$ . Interestingly, frustration shows positive relationship with adjustment  $r = 0.405, p < 0.01$ .

Keywords: Adjustment, Frustration, Stress, Suicidal Intend

M5

[100]

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**PARTICIPATORY EXPLORATION OF FACTORS INFLUENCING THE HEALTH  
OF PEOPLE WITH INTELLECTUAL DISABILITIES IN AN URBAN DISTRICT: A  
PHOTOVOICE STUDY**

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**ABSTRACT**

People with intellectual disabilities (ID) may face multiple disadvantages regarding their physical and mental health. They tend to be more vulnerable to risks of illness (associated with their impairment, medication intake or social determinants, like low socio-economic status) and are confronted with various barriers in health care and health promotion (e. g. communication or programmatic barriers). This study aims to gain a better understanding of the health-relevant factors people with ID experience in their everyday life in an urban area in Germany. An inclusive research workshop was held at the Catholic University of Applied Sciences Berlin. Theoretical basis for the workshop was the paradigm of Participatory Health Research and the Determinants of Health model by Dahlgren and Whitehead. Ten adults with ID and five members of the university (two special education students and three scientists) joined the workshop and worked together as a research group. Photovoice, a participatory research methodology, was utilized. The study was conducted in the district of Berlin-Lichtenberg. The research group collected data by taking photographs and discussing the pictures within the group. This process led to a categorization of qualitative categories and themes. The health-relevant factors identified were multifaceted. They ranged from housing and working conditions to the effects of keeping pets or being affected by racism and discrimination. The findings were prepared in form of an exhibition and provide a basis for developing municipal strategies for inclusive health promotion.

Keywords: People with Intellectual Disabilities, Participatory Health Research, Photovoice, Municipal Strategies of Health Promotion

M6

[101]

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**TRANSLATION AND PSYCHOMETRIC TESTING OF THE ARABIC VERSION  
OF COGNITIVE AND AFFECTIVE VARIABLE AND PHYSICAL ACTIVITY  
INSTRUMENTS**

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**ABSTRACT**

Background: Arabic instruments that test physical activity (PA) and its perceptions among adolescents are lacking. Purpose: To translate from English to Arabic and test psychometric properties of cognitive and affective variable and PA instruments including: Perceived Barriers Scale, Perceived PA Self-efficacy Scale, PA Enjoyment Scale, Social Support Scale, Commitment to PA Scale for Adolescents, and Physical Activity Questionnaire for Adolescents. Method: The translation and psychometric testing of these instruments was completed in six steps: (a) forward translation, (b) revision of the translation, (c) back-translation, (d) revision of the back-translation, (e) pilot study, (f) assessment of reliability and validity. Translation and back-translation involved a bilingual native Arabic translator fluent in English through the Certified Translation Center in Jeddah, Saudi Arabia. Psychometric testing was completed using data from a pilot study. The target population included 31 female adolescents between the ages of 13-18 years in Saudi Arabia. Pilot study data were collected in summer 2015. Results: All scales had acceptable content validity with inter-rater reliability coefficients of 75% and above, the item content validity index and the scale content validity index were 1.00 and the average congruency percentages were 90% and above. For test-retest reliability, all the scales had good reliability with the intraclass correlation coefficients ranging from .84 to .96. Conclusions: The cognitive and affective variables and PA instruments were successfully translated from English to Arabic. Instruments translated to Arabic were reliable and valid. This study supports the use of these instruments in Arabic-speaking countries.

Keywords: Females, Adolescents, Physical Activity, Saudi Arabia

## LONG TERM EFFECTS OF PSYCHOSOCIAL STIMULATION ON DEVELOPMENT OF ANEMIC AND NON ANEMIC CHILDREN IN RURAL BANGLADESH

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### ABSTRACT

Background: Anemic children have developmental deficits that may persist for long duration. Psychosocial stimulation improves development of iron deficient anemic children but its long-term effect is not well documented. Objective: Assess long term developmental benefits of psychosocial stimulation given to 6-24 months old anemic and non-anemic children at 8-9 years of age. Methods: Anemic and non anemic children who participated in a cluster randomized controlled trial in 30 villages in Bangladesh were followed-up for their IQ using Wechsler abbreviated scale of intelligence-II (WASI-II), behaviour using Strengths and Difficulties Questionnaire (SDQ) and school achievement using a locally developed test based on Wide Range Achievement Test (WRAT). All anemic children received 30 mg iron daily for 6 months from enrolment. One-way ANOVA and multiple regression analysis were used to analyze the data. Result: A preliminary analysis showed significant differences in Full Scale IQ (FSIQ) ( $p=0.006$ ) and Performance Reasoning Index (PRI) ( $p=0.004$ ) between non-anemic stimulated group and anemic non-stimulated group. Significant differences were also found in word spelling ( $P=0.018$ ) and math computation ( $P=0.032$ ) between non-anemic and anemic children in stimulation groups. We then combined the groups by anemia status and by stimulation groups to look at each group's differences. Controlling for baseline measures and other SES factors, children who were stimulated had significantly higher FSIQ ( $B=1.9$ ,  $95\%CI=0.6, 3.2$ ,  $p=0.004$ ) and PRI ( $B=2.6$ ,  $95\%CI=1.1, 4.2$ ,  $p=0.001$ ) compared to those who did not receive stimulation. There was no difference between the anemic and non-anemic groups except that the non-anemic children were significantly benefited by stimulation intervention in the verbal comprehension index (VCI) ( $B=3.1$ ,  $95\%CI=0.3, 5.9$ ,  $p=0.029$ ), PRI ( $B=4.0$ ,  $95\%CI=1.6, 6.3$ ,  $p=0.001$ ) and FSIQ ( $B=3.1$ ,  $95\%CI=1.1, 5.1$ ,  $p=0.003$ ). Conclusion: Further long-term studies are required to validate the findings of this trial.

Keywords: Anemia, Bangladesh, Child Development, Iron, Long-Term Effect, Psychosocial Stimulation



## STRENGTHENING THE PUBLIC HEALTH INFRASTRUCTURE IN EMERGENCIES SITUATION TOWARDS HEALTHY COMMUNITY

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### ABSTRACT

**Background:** The impact on quality of health service delivery in the affected community after post-earthquake scenario was in a dire state. Neither service provider nor the affected population could get the quality services. The public health facility reconstruction has brought a new wave in the health service delivery in the affected community.

**Objective:** of this project is to restore the quality health services and strengthening health delivery systems at community level.

**Methodology:** In response to 2015 Nepal earthquake, four birthing centers were reconstructed including restoration of 52 health facilities (HFs) with medical equipment and tents by ADRA Nepal. Moreover, ADRA Nepal organized 200 mobile camps in six mostly affected districts, trained 13 medical doctors on Clinical Management, conducted 601 awareness campaigns and distributed 17,500 hygiene and 3000 dignity kits.

**Result:** The health facilities have been delivering the essential services to the people resulting in decrement in outbound mobility of the local people that reduces travel time and cost. The upgraded public health facilities with birthing services has also added a new dimension in the community and the timely service delivery has helped in alleviate the maternal and infant mortality rate quite remarkably. Through routinely tracking of data, it was evident that reconstructed birthing centers are serving 40-50 patients on an average per day with high level of client's satisfaction which reduced the cost on transportation.

**Conclusion:** Reconstruction of HFs and restoration of service across the healthcare system has become a cornerstone for quality of care improvement and control healthcare costs.

**Keywords:** Health Infrastructure, Earthquake, Reconstruction, Restoration of Service, Client's Satisfaction

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## NON COMMUNICABLE DISEASE RISK FACTORS AT A WORKPLACE IN THE PHILIPPINES: A SCREENING TOWARDS A HEALTHIER COMMUNITY

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### **ABSTRACT**

Non communicable diseases are of major public health concern nowadays. The World Health Organization reports NCDs to be by far the leading cause of mortality in the world, representing over 60% of all deaths. NCDs, are medical conditions which are non-infectious and non-transmissible between persons. These include cardiovascular diseases, cancers, chronic obstructive pulmonary diseases and diabetes mellitus. This is a cross sectional descriptive study which investigated 50 tenured regular employees of Pines City Colleges more than 5 years in service. The employees' risks of developing NCDs were determined using the following risk factors: status of smoking, status of alcohol drinking, family history of non-communicable diseases, physical activity, dietary fiber intake, blood pressure, body mass index, blood cholesterol and sugar. The lifestyle risks identified among regular employees in both sexes identified were: physical inactivity, and inadequate dietary fiber intake. This was further aggravated by data on the measured body mass indices, high blood pressure and high blood cholesterol for most of them. One hundred percent of the males and sixty five percent of the females were at risk due to excess body fat. More than thirty percent of both sexes were at risk due to uncontrolled high blood pressure and high blood cholesterol. Males have higher risks compared to females due to their smoking and alcohol drinking. Those identified as smokers were also identified as alcohol drinkers. Physical inactivity and inadequate dietary fiber intake should be addressed by promoting behavioral changes and by creating a supportive environment in the community.

Keywords: Non-Communicable Diseases, Lifestyle Risks, Employees

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## PRIMARY HEALTH & PUBLIC HEALTH CARE AN AUSTRALIAN INDIGENOUS HEALTH WORKER APPROACH

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### **ABSTRACT**

Australian remote and regional communities receive the health services from multidisciplinary teams through a variety of means. An integral connection to community and health service are the Aboriginal and/or Torres Strait Islander Primary Health Workers. These workers are links between health services, health professionals, western medicine, traditional medicine and spiritual beliefs. They have a unique, respected and often influential position within communities. This enables the indigenous health worker to guide their communities with the programs and initiatives aimed at reducing the poor social determinants within remote indigenous communities and with the intention to also have a positive impact on “Closing the Gap” aimed at reducing the early mortality rate of Australia’s indigenous people.

However, to achieve this we must provide effective and structured training, whilst raising the profile of Indigenous Health Workers whilst developing a sound career structure, career pathways and role descriptions and responsibilities. Currently, there appears to be confusion regarding indigenous health worker’s professional placement, clinical ability, legal authorization and where the health workers see themselves at present and into the future.

As teacher and trainer, I have been exposed to the many debates and misunderstandings of these matters and the question of lineation of Primary Health Care and Public Health or are these blended responsibilities.

My informal discussions with numerous health workers, teaching and experiences will be presented at the ‘Strengthening the Public Health Infrastructure towards Healthy Communities’ conference. As it is only through the strengthening of the Primary Health Care & Public Health care bond that changes can be made.

Keywords: Aboriginal and/or Torres Strait Islander Primary Health Worker, Health

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**A LOOK AT THE REAL PICTURE: STUDY OF AWARENESS ABOUT HEALTH  
INFORMATION MANAGEMENT AMONG PRIMARY LEVEL HEALTHCARE  
PROFESSIONALS IN AN INDIAN DISTRICT**

D Saha

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**ABSTRACT**

Background: The healthcare professionals working in Primary Health Centers (PHCs) in India are the pillars for running all the governmental and non-governmental health programs for the community; thus, good knowledge of Health Information Management (HIM) is an essential requirement. Objective: To know the level of awareness of the primary level healthcare professionals about HIM. Methodology: Cross-sectional study design, employing validated questionnaire was used for data collection during January – June 2016. 119 healthcare professionals, working in 57 PHCs of a selected district in India, who were involved in some process of HIM activities, were included for the study. Result: Limited awareness was noted among these healthcare professionals about HIM; especially in the areas of Data Collection, Protection, Analysis, Utilization, Storage of Patient Records and Reporting. Concluding, this study definitely gives the real picture about the level of awareness about HIM and draws attention towards the training needs of these professionals for the continual improvement of their skills and knowledge.

Keywords: Primary Health Centers, Health Information Management, Primary Level Healthcare Professionals, Training, Awareness

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## ANALYSIS OF PUSKESMAS EXPENDITURE IN THE ERA OF HEALTH INSURANCE IN INDONESIA (CASE STUDY IN KEDIRI CITY, EAST JAVA)

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<sup>1</sup>*Faculty of Public Health, Universitas Airlangga, Indonesia*

### ABSTRACT

Since 2014 Indonesia has initiated a National Health Insurance (JKN) program and it is expected to achieve universal coverage in 2019. *Puskesmas* (Health Service Center) is a health service unit which is run by the government and is currently implementing the preventive and curative efforts as well. This research was conducted to analyze how *Puskesmas* allocates its budget in the era of JKN. The research design was an observational with cross sectional study. Financing data from all *Puskesmas* in Kediri (9 *Puskesmas*) was analyzed. The result shows that from 2014 to 2016 total of the expenditure throughout *Puskesmas* has increased, mainly encouraged by funds of the JKN program (an average of 64.45% of total funds). In 2014, the funding at all *Puskesmas* was US \$31,028 (US \$2.30 per capita) to US \$35,873 (US \$2.66 per capita) in 2016. The *Puskesmas* expenditure pattern consistently and dominantly oriented to curative aspects by 64.32% and 11.37% for preventive activities. Despite a significant increase for preventive expenditure from approximately US \$61,000 (US \$0.19 per capita) in 2015 to about US \$ 133,000 (US \$0.39) in 2016, the expenditure was a direct fund, from the central government, through the fund scheme of Health Operational Assistance (BOK). The results shows that it is necessary to evaluate the expenditure in *Puskesmas* more deeply especially the fund allocation sourced from of *JKN* program and it needs to arrange the role of *Puskesmas* so that it will have a bigger role in preventive effort.

**Keywords:** *Puskesmas* (Health Service Center) Expenditure, Preventive, Curative, National Health Insurance

## TRANSFORMATIVE LEARNING ON PUBLIC HEALTH RESEARCH FOR NEXT GENERATION OF PUBLIC HEALTH EXPERTS IN BANGLADESH

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### ABSTRACT

**Background and Objectives:** Transformative learning is a holistic process that places students at the center of their own active and reflective learning experiences aiming to transform learnt lessons to practice. According to Dean Julio Frenk, the initiative will foster changes in education that will “break the mold,” pushing the traditional discipline-based boundaries of academia, research and public health in the Globe. But the effectiveness of transformative learning in Bangladeshi educational settings has not yet been adequately studied. The health sector is recognized as one of the poorly managed sector in the world. The major causes of poor management of health services may be due to poor performance of health service providers in management and leadership that may be related to traditional, fragmented, isolated, inefficient public health education prevailing in Bangladesh. The present study was undertaken to test the hypothesis that transformative learning is effective method as compared to the traditional teaching methods.

**Methods:** Under a comparative interventional design two groups of Master in Public Health students [n=36 for intervention group and n=36 for control group], were selected purposively from North South University of Dhaka, Bangladesh. Data were collected during pre- and post- intervention phase through self-administered method by using structured questionnaire and portfolio. Development of skills was assessed on the basis of development of research proposals and reports. Moreover, attitude was measured through focused group discussion. An overall and individual score was compiled and data were compared using appropriate tests between baseline and final values in each group as well as between the two groups at each time points.

**Results:** Total knowledge score on quantitative research methods showed significant increase ( $p < 0.005$ ) after educational intervention and the scores were  $9.44 (\pm 1.132)$  and  $17.86 (\pm 1.018)$  in both control and intervention groups respectively. Total knowledge score on qualitative research methods showed significant increase ( $p < 0.005$ ) after educational intervention and the scores were  $7.33 (\pm 0.894)$  and  $16.75 (\pm 0.937)$  in both control and intervention groups respectively. In comparison to the control group, most of the students of the intervention group had completed developing their research proposals and reports and also had more number of papers published. Conducted FGDs revealed that the students, who had undergone transformative learning, were satisfied with the method of education.

**Conclusion:** Transformative learning seems to be superior and effective to traditional method as a short-term interventional tool for post-graduate teaching method in public health. The difference between the two methods on longer term intervention remains to be seen. This study creates a need to adopt a systematic approach to manage accumulated knowledge and reform the instructional dimensions of the public health education to ensure skills and competencies of both faculty and graduates.

## DIAGNOSTIC ACCURACY OF GMHAT-PC MARATHI: A CROSS SECTIONAL STUDY IN RURAL MAHARASHTRA

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### ABSTRACT

Mental illnesses are significant contributors to the burden of disease. They cause loss of quality of life, economic loss and social dysfunction. Mental health problems at early stage remain unrecognized and untreated. There is tendency to conceal even severe psychiatric problems due to stigma. A large proportion of people with mental disorders around the world fail to receive appropriate help in spite of developments in new treatments for mental illnesses (psychological and social as well as medicinal). One of the important reasons is primary care health services providing inadequate training and poor skills for detecting and treating people with mental health problems. A comprehensive standardized assessment and identification of mental health problems at primary care level is essential in providing appropriate care to mentally ill. The Global Mental Health Assessment Tool – Primary Care Version (GMHAT/PC) is a computerized clinical assessment tool developed to assess and identify a wide range of mental health problems in primary care. This cross sectional study aims at assessing the diagnostic accuracy of the GMHAT-PC Marathi version for 500 persons reporting to psychiatric units. Results show overall alpha was 0.854 with the reliability coefficient of  $r=0.921$ . The overall 'k' is 0.744 with sensitivity of 96.5 and specificity of 74.75%. The computer assisted GMHAT/PC - Marathi shows good diagnostic accuracy for quick and comprehensive assessments and diagnoses of mental disorders for Marathi speaking population. This study may be considered a step towards quality and potentially equitable mental health assessment.

Keywords: Diagnostic Accuracy, GMHAT-PC Marathi, Computerized Assessment

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## HEALTH PROMOTION EFFECT ON WOMAN KNOWLEDGE LEVEL ABOUT CERVICAL CANCER AND PAP SMEAR IN PUBLIC HEALTH CENTER KENDAL KEREP MALANG

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### **ABSTRACT**

**Background:** Cervical Cancer is the number one of woman killer in Indonesia. Each year, there are 20.928 new cervical cancer new cases in Indonesia. In 2012, there are 747 women in Malang suffering from cervical cancer. Early detection and pre-cervical cancer treatment are necessary to be the priority. One of the methods to distribute the information on early detection is by conducting the health promotion about cervical cancer and pap smear.

**Purpose:** Knowing the health promotion effect on women knowledge level about cervical cancer and pap smear in public health center Kendal Kerep malang city.

**Method:** This study used quasi experimental one group pretest-posttest design. There 53 respondents were taken in total sampling. The respondents were given the pretest questionnaires followed by health consultation and Leaflet, afterwards, the respondents were given the posttest questionnaires. Data analysis was performed using paired t-test.

**Results:** The result of paired t-test showed the value of P questionnaire of 0.000 so it is obtained P value <0,05 indicating that there was difference of influence of health promotion to woman knowledge level about Cervical Cancer and Pap Smear before and after counseling.

**Conclusion:** There are health promotion effect on women knowledge level on cervical cancer and pap smear in public health center kendal kerep malang city.

**Keywords:** Health Promotion, Knowledge, Pap Smear



## THE INFLUENCE OF SELF CARE GROUP TOWARDS CONFIDENCE OF LEPERS IN JENEPONTO REGENCY

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### **ABSTRACT**

Leprosy ,one of neglected tropical diseases, is a contagious disease that is so feared by all of people. It is still become one of the problems that faced by the world society because it can lead to a very complex problem. People who are suffering from leprosy may have disabilities that are settled if it does not get healing and handling well. As impact, lepers who had been leprosy deseas get some difficulties for instant, the anxiety to approach themselves into society, lost their social status progressively, isolated from family, friends, and society. therefore, the effort to avoid distabilty toward lepers is a self caring. Selfcare can prevent disability and encourage patient self-awareness to heals. It can be developed become a selfcare group that help lepers to support each other. Because there is a quote “camaraderie”. The method in this research is A cross-sectional study with 35 lepers was followed by a focus group discussion with fasilitator and health workers. The results of this research, that majority of lepers were women (68.6%), mostly aged 36-45 years (28.6%), 25 respondents (71.4%) followed self care group activities, 62.9% (22 respondents) have good confidence. Result of analysis with Chi-square test showed there was correlation between participation in self care group with confidence of leprosy patient  $p = 0,031$ , OR = 7,389 (CI 1,441-37,883). In focus group discussion , the members of self-care group stated that the self-care group had an important role in improving the confidence of leprosy patients through interaction and communication between each member, motivation and other activities. as conclusions, Self Care Group very helpful to increasing lepers’ confidence. Suggestion: This activity can be developed throughout the health centers in Jeneponto. Also expected cross-sectoral cooperation in the development of Self Care Group.

Keywords: Selfcare Group, Lepers, Confidence

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**PERCEIVED BENEFIT CHANGE TO SELF-SCREENING BREAST CANCER  
DISEASES AMONG YOUNG MOTHER WITH HEALTH BELIEF MODEL  
APPROACH**

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**ABSTRACT**

Background : Breast cancer is one of the main causes of death that resulted by cancer in women. Self-screening breast cancer a significant action to decrease mortality among young mother form breast cancer diseases. Primary prevention breast cancer disases include: mammografy, clinical breast examination, and self-screning. The purpose of this study is to analisa perceived benefit change to self-screening breast cancer disease among young mother with Health Belief Model approach. Research Method: Design this study is quasi-experiment one group pretest-posttest approach. This experiment during one week on June 2016. The subject of this experiment were 60 woman by using Purposive Sampling. The data analyzed by computerize system by SPSS version 20 by wilcoxon and significant level was 0,05. Result : The result analysis was  $p = 0,000$  and then  $p < 0,05$ , so the hypothesis was accepted. It can concluded there was perceived benefit change to self-screenig breast cancer diseases among young mother with health belief model approach. Conclusion : Perceived benefit change can be lead positive behavior among young mother to take action self-screening breast cancer diseases.

Keywords: Perceived Benefit, Young Mother, Self-Sreening

## EFFECT OF EDUCATIONAL INTERVENTION USING MOBILE PHONE ON SELF-CARE BEHAVIORS OF PATIENTS WITH THALASSEMIA MAJOR

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### ABSTRACT

**Introduction:** One way to improve the quality of life in patients with thalassemia major is empowering patients through self-care education. The aim of this study was to determine the effect of educational intervention using mobile phone on self-care behaviors in patients with thalassemia major.

**Methods:** The study population of this interventional study was patients with thalassemia major who referred to Hazrat Abolfazl hospital in Minab in the province of Hormozgan. 46 patients were assigned in the intervention group and 45 patients in the control group. Educational program consisted of familiar with thalassemia disease, complications and self-care behaviors that were made during the six calls and lasted for a month. Also educational pamphlets were given to the patients. Data were collected before and two months after education by a questioner and analyzed by SPSS22.

**Results:** Before the intervention, the mean scores of knowledge, attitude and self-care behaviors in the intervention and control groups were not statistically significant. After the intervention a significant increase in mean scores of knowledge, attitude and self-care behaviors observed in the intervention group ( $p < 0.001$ ), but no significant difference was observed in the control group.

**Conclusion:** The results of this study indicated the positive effect of educational intervention through mobile phone on knowledge, attitude and improvement of self-care behaviors in patients with thalassemia major. Hence, using mobile phone as a method for transmission self-care education materials to patients with thalassemia major, especially when access to them is limited, is recommended.

**Keywords:** Knowledge, Attitude, Self-Care, Thalassemia Major, Mobile Phone

**A SURVEY OF KNOWLEDGE, ATTITUDES, AND PRACTICES OF MALARIA IN  
A RURAL ENDEMIC SETTING OF KULON PROGO, INDONESIA : A ONE  
HEALTH APPROACH FROM PROMOTE PROJECT**

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**ABSTRACT**

**Background:** More than 140 million Indonesian people live in Java Island. Rapid human migration and dense population, risk of malaria transmission occurred in Java Island seems to be susceptible. Kulon Progo, especially in district Kokap as a rural endemic area in the middle-south Java Island, contributes malaria incidence in Java. Despite availability of effective medication and prevention, malaria awareness among communities appear to have fundamental role in malaria elimination in Kokap, Kulon Progo.

**Objective:** The purpose of this study was to determine and compare Knowledge, Attitudes, and Practices (KAP) about malaria in the communities of Kulon Progo, and to provide information for development of malaria elimination strategies and policies through “One Health” approach, an interdisciplinary strategy from multi sectors especially medicine, veterinary medicine, and public health.

**Methods:** A cross-sectional KAP survey was conducted in the communities of district Kokap, Kulon Progo, Indonesia. Surveys were managed and analyzed using IBM SPSS Statistics 20. Each measure of KAP was then analyzed and divided into three different levels: good (67 to 100%), fair (34 to 66%), and poor (less than 34%).

**Results:** A total of 102 respondents, mostly men (54.9%) and farmers (76.5%) were surveyed. Most respondents achieved an good score in two measures: knowledge (n=94.11%, mean score: 75.8) and attitudes (n=98.03%, mean score: 76.9). In practice measure, most respondents only could achieve fair score (n=88.23%, mean score: 56.9).

**Discussion:** Knowledge measurement does not appear to relate with education level (p=0.523). Based on knowledge survey, most respondents correctly answered that malaria is transmitted by mosquito (92.15%) and insecticide-treated nets (ITN) are used to prevent mosquito bite (87.25%), but admitted

not to know malaria prevention & management correctly (69.6%). More than half of respondents (56.9%) were able to identify correctly the main symptoms of malaria disease.

**Conclusions:** Although attempts to increase health promotion and education through village malaria cadres by Health District Office and Primary Health Center (PHC) in order to eliminate malaria in Kulon Progo have been encouraged, community's practices on malaria prevention and management has not been improved adequately to achieve a good score. To gain the goal of malaria elimination in Kulon Progo, village malaria cadres and local government should focus on increasing community's practices on malaria management and prevention through "One Health" approach.

N6

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## SELF RATED ASSESSMENT OF CONFLICT AT WORK AMONG STAFF NURSES OF TERTIARY CARE HOSPITAL IN NEW DELHI

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### ABSTRACT

**Introduction:** Among the list of stressful professions all over the world Nursing Profession tops the list. In most tertiary care hospitals nurses are the ones who are most stressed out due to conflict at workplace though working at the bottom of the hierarchy. There is lack of data on stress among nurses due to conflicts at work and other work related issues, which led to this study. **Method:** A hospital based cross sectional study was carried out on 102 randomly selected staff nurses working in tertiary care teaching hospital of Delhi. Data was collected using pre-tested and self-administered questionnaire. Socio-demographic profile, general job information, conflict at work and work hazards was assessed. The data was fed and analyzed using SPSS 17 software. **Results:** Out of the total 102 nurses, 80% of nurses were females and 98% were married. The mean age of the study group was 38.52 (7.107). Mean work experience in this profession was 16.40 (5.880) years and with the present employer is 4.57 (1.680) years. Mean work duration per week is 49.90 (7.976) hours. Out of the total nurses 45.1% agreed that there were clashes between subgroups within their group. 42.1 % agreed that there is 'we' feeling among members of their group, 42.1% agreed on difference of opinion among members of their group and 43.1% revealed that the relationship between my group and others groups is harmonious in attaining the overall organizational goals. **Conclusion:** More than half of the total nurses reported stress due to conflict at work, and this suggests the need for empowering staff nurses regarding skills of resolution of conflict at workplace.

Keywords: Conflict, Workplace, Nurses, Profession, Hospitals, Occupational Stress

N7

[116]

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**TO ASSESS THE EMOTIONAL MATURITY OF MOTHERS OF CEREBRAL  
PALSY CHILDREN AMONG RURAL AREA**

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*Jawaharlal Nehru Medical College, DMIMS(DU), Sawangi (Meghe), India***ABSTRACT**

Cerebral palsy is a group of permanent disorder which affects posture, movement and coordination. It gives financial and psychosocial burden to the parents. Maternal emotional distress while caring such child with functional limitations is significant. This study was planned to assess emotional maturity among mothers to cope up the situation and to develop strategies which can regulate mothers emotions. A cross sectional study with purposive sampling of 50 number of mothers of CP children was carried out at Aacharya Vinoba Bhave Rural Hospital , Sawangi , Wardha, MS, India. The assessment was done by using EMS ( Emotional maturity Scale ). The outcome of the study shows emotional progression and social adjustment areas of EMS had high correlations. Emotional progression had significant positive correlations with Independence, social adjustment and emotional stability. Effective rehabilitation should include repeated follow up , interviews and provide psychological support for the mothers along with their children treatment including home based training programme for better outcome .

Keywords: Cerebral Palsy, Maternal Emotional Distress, EMS , Independence , Social Adjustment, Emotional Stability

T1

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## HAVE THE ADOLESCENTS BE POWERFULL IN THE IMPLEMENTATION PROGRAM FOR THEM?

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### **ABSTRACT**

The population of adolescents in Indonesia is almost 30% of the total population of Indonesia. This figure is quite large as a potential asset for the country. Today the percentage of adolescents who engage in high-risk behavior is quite high. Data of Health Ministry that show the number of HIV cases in productive age is increasing from year to year. Therefore, youth health programs are a national priority. Many teenage health programs have been conducted from various sectors. This study aims to identify adolescent perceptions on the implementation of youth health programs. Teenagers in this case are grouped into 2, namely as peer educator and as the target program (user). This study looked at adolescent perceptions in relation to the strategic steps of adolescent health programs. This research is descriptive research by using qualitative method, subject of research is adolescent stakeholder which are consisting of teenage school, adolescent community, teenage mosque and Juvenile Street. Data were collected through interviews with 10 peer educators (schools and communities), interviews of 2 juvenile street users, 3 teenage mosque interviews, 24 FGD participants (2 FGDs in School and 2 FGDs in the community). The results showed that the adolescent group of providers and users are still categorized as 'observers' (support, weak power and passive involvement) in the implementation of the strategic steps of youth health programs. There are even teenagers from community youth groups who have not been exposed to teenage health programs. Adolescent health programs should involve teenagers from planning until evaluation. Therefore, the existing program suits needs and abilities of adolescents (from by for teenagers).

Keywords: Adolescent, Health, Program



T2

[118]

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## ANALYSES OF FACTORS RELATED TO JUVENILE DELINQUENCY AT JUVENILE COURT BLITAR EAST JAVA -INDONESIA

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### **ABSTRACT**

Juvenile delinquency is any action by someone designated as a juvenile an age 16 to 18 years that would make to action by juvenile court. Juvenile delinquency related to adolescent with antisocial personality with varies formed and level from mild to severe. Many factor as background of deviation of social behavior of adolescent (juvenile delinquency), so identify of background factors is important. This research is *observational analyses* with correlational design. Purpose of this research is to analyses of factors related to juvenile delinquency at Juvenile Court Blitar. The benefit of research is as based data to treat of adolescent problems for future. This Research hypothesis is there are relation between internal and external factors with Juvenile Delinquency at Juvenile Court Blitar. Population are all adolescent who stay at juvenile court Blitar with categories “anak pidana and “anak negara” with number 109 persons. Sample is 50% from population plus 15% sample, using simple random sampling technique with number 63 persons. The analysis was conducted to determine the factors behind the occurrence of Juvenile Delinquency by using descriptive analysis. The results showed that the type of Juvenile Delinquency in juvenile court was mostly due to cases of rape or sexual harassment, and then theft and murder. The background of juvenile delinquency is as follows: 1) more boys than women and low education level. 2) The position of the eldest child and comes from an incomplete family (living only with the father alone or mother alone, living alone, with grandparents or living with extended family.3) in the past, Having sex outside of marriage or sexual harassment. 4) the influence of peers and the ability of problem solving is low. The recommendations of this research are to increase the strengthening of the socio-ecological system of adolescents in the family and school environment, strengthening the policy of primary and secondary education, early detection from early adolescence, controlling the environment of adolescents, and improving communication and coordination between parents, teacher.

Keywords: Factors, Juvenile Delinquency, Juvenile Court

T3

[119]

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**THE RELATIONSHIP OF SELF CONCEPT WITH MEDICATION ADHERENCE  
TO ARV IN HIV-POSITIVE WOMEN'S REPRODUCTIVE IN POLY VCT  
WALUYOJATI GENERAL HOSPITALS PROBOLINGGO INDONESIA**

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**ABSTRACT**

Globally, HIV epidemic has entered a critical condition. A number of HIV cases for each Province in Indonesia's that second-highest in the province of East Java with a number of cases began 1987 – March 2016 in East Java are 26,052 people. A number of HIV women patients until March 2016 was 74,512 people. Poly VCT data until 30 November 2015 a number of 657 patients receiving ARV. 49 people have died, 10 people referred to and 20 people drop out. Routine control on schedule and regularly drank to ARV was 273 people and irregular drank to ARV was 297 people. The aim of this research was to analysis the relationship of self concept with medication adherence to ARV in HIV-positive women's reproductive in Poly VCT Waluyoajati General Hospitals Probolinggo Indonesia. This research use analytic correlational design with cross sectional approach. Population of the study were all HIV-positive women's reproductive who visit and get treatment medication to ARV in Poly VCT Waluyoajati General Hospitals were 81 people. A sample of the study were 68 people. The sampling technique using consecutive sampling and statistical tests using pearson product moment. The results showed a P value = 0.167 < 0.05. Conclusion that there were no relationship of self concept with medication adherence to ARV in HIV-positive women's reproductive in Poly VCT Waluyoajati General Hospitals Probolinggo Indonesia. We recommend on next research that you will conduct to control confounding variable for quantitative research and partisipatory observations for qualitative research to search for the real cause of someone's not adherence on the treatment of ARV.

Keywords: Self concept, Medication, Adherence, ARV, HIV, Women

T4

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**ASSOCIATION BETWEEN *HIKIKOMORI* (PROLONGED SOCIAL WITHDRAWAL) AND CHILDHOOD AND PRESENT FAMILY RELATIONSHIP***Y.K.F Roseline**Akita University Graduate School of Medicine, Japan***ABSTRACT**

This study aims to present nationally representative data on prevalence, association between *hikikomori* (prolonged social withdrawal) and childhood and present family relationship. The data was obtained from the multistage sampling National Young Adults Attitude Survey (N-YAAS) held among 5000 household residents (aged 15 years - 39 years) randomly selected from resident registry of 200 urban and suburban municipalities in Japan conducted in February 2010. The data contained 3,272 effective participants (effective response rate: 65.4%), 47.7% were men (n=1561) and 52.3% were women (n=1712). The prevalence of *hikikomori* was 1.8% (n=59). Significantly more men in the *hikikomori* group (66.1%) compared to the non-*hikikomori* group (47.4%). Chi-square test shown that living in an area with or without shops and service industries can be associated with *hikikomori* ( $p=0.042$ ). Multiple logistic regression analysis revealed that overprotective parents (OR=2.772, 95%CI=1.309-5.868), unhelpful parents (OR=2.129, 95%CI=1.011-4.487), serious illness in childhood (OR=3.076, 95%CI=1.140-8.298), and poor relationship between family members (OR=2.288, 95%CI=4.591) were associated with *hikikomori* after adjusted for all possible confounding factors. This is the first epidemiology study that explored the relationship between *hikikomori* and family relationship using the general population sample. Poor childhood experience with family members and poor relationship between family members are associated with *hikikomori*.

Keywords: Hikikomori, Social Withdrawal, Epidemiology Study, Family Relationship, Prevalence

R1

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## UTILIZATION STUDY OF ANTI-DIABETIC AGENTS IN A TEACHING HOSPITAL OF SIKKIM AND ADHERENCE TO CURRENT STANDARD TREATMENT GUIDELINES

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### ABSTRACT

**Objective:** Diabetes has gradually emerged as one of the most serious public health problems in our country. This underlines the need for timely disease detection and decisive therapeutic intervention. This prospective cross-sectional observational study aims at analyzing the utilization pattern of anti-diabetic agents in a remote North-East Indian tertiary care teaching hospital in the perspective of current standard treatment guidelines.

**Materials and Methods:** Diabetic patients receiving anti-diabetic medication, both as outpatients and inpatients in our hospital over a period of 12 months (May 2013–May 2014), were included in this study. The data obtained were sorted and analyzed on the basis of gender, type of therapy, and hospital setting.

**Results:** A total of 310 patients were included in the study. Metformin was the single most frequently prescribed anti-diabetic agent (66.8%) followed by the sulfonylureas group (37.4%). Insulin was prescribed in 23.2% of the patients. Combination anti-diabetic drug therapy (65.1%) was used more frequently than monotherapy (34.8%). The use of biguanides ( $P < 0.0001$ ) and sulfonylureas ( $P = 0.02$ ) in combination was significant as compared to their use as monotherapy. A total of 48% of all antidiabetic combinations used, comprised metformin and sulfonylureas ( $n = 96$ ). Insulin use was significantly higher as monotherapy and in inpatients ( $P < 0.0001$ ). The utilization of drugs from the National List of Essential Medicines was 51.2%, while 11% of antidiabetics were prescribed by generic name.

**Conclusion:** The pattern of utilization largely conforms to the current standard treatment guidelines. Increased use of generic drugs is an area with scope for improvement.

**Keywords:** Antidiabetics, Anti-Diabetic Drug Utilization, Pharmacoepidemiology, Prescription Pattern Study

R2

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**METABOLIC SYNDROME RISK FACTORS IN EMPLOYEES FACULTY OF  
PUBLIC HEALTH, UNIVERSITY AIRLANGGA**

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*Department of Epidemiologi, Faculty of Public Health, Universitas Airlangga, Indonesia***ABSTRACT**

Metabolic syndrome is a clustering symptoms with cardiometabolic factors including obesity, insulin resistance, dyslipidemia, and elevated blood pressure. Several previous studies have shown the risk factors for metabolic syndrome, such as obesity, smoking, lack of physical activity and unhealthy diet. Data on smoking risk factors with the incidence of metabolic syndrome have been demonstrated in the Bogalusa Heart Study. There is currently little data on risk factors associated with metabolic syndrome especially in Indonesia. This study aims to identify risk factors associated with metabolic syndrome at the Faculty of Public Health Airlangga University. This research uses descriptive method with cross sectional design. Population in this research is Employee Faculty of Public Health University of Airlangga. Diagnosis of Metabolic syndrom was followed by National Cholesterol Education Program Adult Treatment Panel III (NCEP ATP III). Data analysis was performed by descriptive to determine the risk factors and metabolic syndrome. The results showed 35,14% (13/37) respondents included in the metabolic syndrome. Metabolic syndrome is more common in women as much as 53,84%. Risk factors that influence is Diabetes Millitus 92,3%, HDL Level 76,92%, Abdominal Central 76,92 %, High Blood pressure 69,23% and Triglyceride levels 30,77 %. Recommended behaviors are calorie restriction, regular physical activity, reduced saturated fat intake and quit smoking.

Keywords: Risk Factors, Metabolic Syndrome, Behavior

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**RENAL COMPLICATIONS IN DIABETIC PATIENTS**

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*MAHSA University, Malaysia***ABSTRACT**

The aim of this cross sectional study was to find out the prevalence of renal complications in diabetic patients admitted in the medical ward in general hospital in Malaysia. A 24 - hour urine and 5 ml blood samples were collected and analyzed in Olympus analyzer for the creatinine clearance (Ccr) which was used as an endogenous marker of glomerular filtration rate (GFR). According to level of Creatinine clearance the patients were graded into different stages of renal failure. Among the 50 patients studied, 29 patients (58%) had acute renal failure, 18 (36%) had chronic renal failure and 3 had diabetic nephropathy. Eighty percent of the patients were elderly (age 50-79) with male dominance of 1.94:1 over the female. Thirty one patients (62%) were overweight or obese and statistically BMI had definite association with severity of diabetes mellitus ( $p<0.05$ ). Although statistically not very significant other variables like high protein diet, smoking, urban living and level of education could not be rejected as having no association. The incidence of renal complications in diabetic patients was found to be significantly high. In conclusion, among 50 patients who were diabetic, most of them were suffering from acute renal failure (58%), followed by those who had chronic renal failure (36%) and lastly, 6% (3 cases) had diabetic nephropathy. Diabetes mellitus and its complications such as diabetic nephropathy, acute renal failure and chronic renal failure were more commonly seen in males compared to females, at middle age group, and were associated with high BMI, high protein intake and those living in urban areas.

Keywords: Renal Failure, Diabetic Nephropathy, Creatinine Clearance, Metabolic Disorder

**SOCIAL CAPITAL AND MENTAL HEALTH IN INDONESIA**

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**ABSTRACT**

Mental health is the integral part of overall health. As define by world health organization (WHO), health is a state of complete physical, mental, and social well-being. Previous studies show that mental health problem affect individual productivity, increasing risk for other illness, as well as decrease of potential role in family and community. Despite the importance of mental health, most health policy are directed for physical, while mental issues left behind. The similar pattern is also happen in Indonesia. Indonesia's Ministry of Health (MoH) reported that in 2013 about 8% of people in age 15 and more are experience emotional mental disorder, while more than 400,000 (0.2%) suffer severe mental disorder. In addition, the government of Indonesia (GoI) has enacted law Law no. 18 Year 2014 concerning mental health yet government spending on mental health only 1% of total health spending. This paper aim to examine the impact of social capital to individual mental health. We utilize IFLS 2014 database since it provide comprehensive information on mental health as well as social capital. Mental health is represented by self-reported of depression CESD-R-10 scale. The scale range from 0 – 30, individual with score 10 or more is considered depressed. Social capital represented by social trust in individual and community level as well as participation in community. The research using mixed level regression model method with number of observation 28,257 respondents. We also incorporated control variable such as age, gender, marital status, working status, household size, income, and education. Preliminary result of the study showed that social trust and participation in community has no significant contribution to depression. On the other hand, control variables such as being older, male, and married associated with lower probability of depression.

**Keywords:** Social Capital, Mental Health

## THE LENGTH OF BREASTFEEDING AND MENTAL HEALTH STATUS IN INDONESIA

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### ABSTRACT

The number of people suffering from mental illness are increasing in Indonesia. Thus, it is necessary to prevent the disease at a very early stage. One of the potential prevention is to provide adequate breastfeeding. This study attempts to provide the relation of providing breastfeeding to the (receiving) children's mental health status in Indonesia using data from IFLS 1 (1993) and IFLS 5 (2014). The relation between providing adequate breastfeeding in 1993 and the mental health of the children in 2014 is estimated using probit regression analysis. Breastfeeding rate is estimated using the number of days of providing breast milk. Control variables such as current children's age, sex, marital status, employment status, place of living, number of household members, health condition, as well as parent's education during breastfeeding period are included. Unfortunately, the mental health condition of parents are not available in IFLS 1. The length of breastfeed has a negative correlation with the mental health of children, although it is not statistically significant. Therefore, it seems that longer breastfeeding may lead to better mental health of children. Other control variables, namely number of children's household member (+), children's marital status (-), health condition (-), and employment status (+) are significantly correlated to children's mental health. Incorporating Rasch model calculation may lead to clearer results, which is our next step in this study. Other significant control variables warrant further investigation as they may have direct relationship with the mental health of children.

Keywords: Breastfeeding, Mental Health, Economic Analysis, IFLS, Indonesia



M10

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## THE MEDICAL AND NON-MEDICAL COSTS OF TREATING MENTAL ILLNESS IN INDONESIA

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### ABSTRACT

The number of people suffering from mental illness are increasing in Indonesia. Mental illness is related to high medical and non-medical costs, and this study estimates the medical and non-medical costs of providing inpatient care to treat mental illness in Indonesia. We conducted costs analysis in a main mental health hospital in West Java, the most populous province in Indonesia. We collected data from October 2014 to October 2015 on utilization, number of cases, costs, resources and equipment data and employ micro-costing analysis whenever possible to estimate the medical costs. Non-medical costs were estimated from another study within the same setting, encompassing patients' and their families' travel costs, productivity loss, and meal costs. Most patients are male (70%) and suffer from schizophrenia paranoid ( $\pm 30\%$ ). The average treatment cost per person is US\$287.07 and US\$347.06 for patients paying privately and patients using social insurance, respectively. The largest costs component for both patient groups is room and administration cost. The average non-medical cost is US\$ 221.21, and almost 75% from this amount is the estimated productivity loss of patients and their families. The total cost of treatment and indirect costs are large and may surpass the patients' and their families' income, potentially leading to substantial financial burden. Thus, early treatment is important for this crucial but often neglected disease, as it is not just low cost, but may also avoid the medical and non-medical costs of inpatient care, and lead to better productivity for the patients.

Keywords: Mental Illness; Mental Health; Cost of Treatment; Economic Analysis, Indonesia

Q1

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## EVALUATION OF GOVERNMENTAL ORAL HEALTH-CARE INFRASTRUCTURE IN THE STATE OF HARYANA, INDIA

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### **ABSTRACT**

Health system should be organized to meet the needs of entire population of the nation. Oral diseases are the most common of the chronic diseases, but there are few efficient dental care systems to cope with these problems. The present cross-sectional study was conducted among 135 dental care units of various primary healthcenters, community health centers, and general hospitals existing in the state to evaluate the government oral health-care infrastructure in Haryana state. Data regarding provision of water and electricity supply, dental workforce and their qualification, number and type of instruments in the dental operatory unit, etc., were collected on a structured format. There is a shortfall in infrastructure and significant problem with the adequacy of working facilities. This can prove to be a big hurdle in the provision of adequate oral health care to people with greatest health-care needs. A great deal of effort is required to harmonize the oral health-care delivery system.

Keywords: Evaluation, Facilities, Government, Haryana, Oral Health Care

## **A REVIEW OF MEDICATION ERRORS REPORTED TO THE MALAYSIAN MEDICATION ERROR REPORTING SYSTEM (2009-2012)**

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<sup>5</sup>*National Pharmaceutical Regulatory Agency, Ministry of Health, Selangor*

### **ABSTRACT**

Understanding the magnitude and the nature of errors as well as the reporting rate is vital in designing appropriate safety solutions to reduce medication errors (MEs). In Malaysia, MEs are tracked using the Medication Error Reporting System (MERS), a national voluntary reporting system which was implemented in 2009. A retrospective review of the MEs submitted to MERS from January 2009 to December 2012 was conducted to examine its characteristics. A total of 17,357 MEs were reviewed. The majority (82%) of the report originated from government hospitals while 16% came from clinics. Of the total reports, 86.3% were classified as near misses. Prescribing errors were reported in more than three-quarter (76 %) of the MEs. Most of the MEs (98.1%) had no harmful effect on the patients. Cases of wrong dose or strength of a medication were the largest identified group of the reported errors. Pharmacist detected and reported the majority of MEs. Cardiovascular drugs, infection, respiratory, endocrine and nutrition, and blood disorders were the most frequently reported classes of medication errors. MERS provides rich information on the characteristics of MEs reported. While the majority of MEs reviewed originated from the government hospitals, to low contribution of reporting from other healthcare facilities including the private sectors, need to be addressed. The small number of participation from non-pharmacists in MEs reporting in the primary care settings requires further assessment. Preventive measures should emphasis on improving the prescribing competency among the identified fallible prescribers.

**Keywords:** Medication Errors, Reporting, Review, Malaysia

E10

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## KAP STUDY ON HYGIENE AND SANITATION IN A SELECTED RURAL AREA OF BANGLADESH

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### ABSTRACT

United Nations General assembly explicitly recognized the human right to water and sanitation which is also essential to achieve target six of sustainable development goals. A descriptive type of cross sectional study was carried out to observe knowledge, attitude and practice on hygiene and sanitation in a selected rural area with a sample size of 247 who were purposively selected. The age structure of the respondents showed that 47.4% belonged to 34-48 years and 43.3 % belonged to 19-33 years' age group with mean age  $35.53 \pm 9.110$  years. It was a Muslim dominated area represented by 78.1 % as Muslim. Among them 62.8% and 37.2% were female and male respectively. Study revealed that of the respondents 56.3% had knowledge about germ free water as safe, 11.7% opined it as smell free, 14.2% replied it as both smell and germ free but 17.8 % had no knowledge about it. About sanitation, 48.2% mentioned hygienic latrine, 11.3% mentioned clean environment and 28.3% did not know about it. Among them 49.0 % respondents cleaned glass by water, 32.0% used detergent and 19.0 % did it by straw/leaf. Of the respondents 30.4 % used soap after children bottom cleaning and only 6.5% did not do it. There was a significant association between education and knowledge on sanitation and safe water ( $p < 0.001$ ). Water and Sanitation is a component of the Bangladesh Poverty Reduction Strategy. So, it has got due attention by stakeholders and international development organizations.

Keywords: KAP, Sanitation, Rural, Education

E11

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**KNOWLEDGE, ATTITUDE AND PRACTICE OF CERVICAL CANCER  
PREVENTION AMONG WOMEN RESIDING IN AN URBAN SLUM IN LAGOS,  
SOUTH WEST, NIGERIA**

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**ABSTRACT**

Cervical cancer is the most common genital tract malignancy among women in Nigeria. Women living in slums usually have poor health knowledge and poor health behaviours. This study assessed the knowledge, attitude and preventive practices towards cervical cancer among women living in an urban slum in Lagos, Nigeria. This descriptive cross-sectional study was carried out amongst 305 women of reproductive age in Idi-Araba, a slum in Lagos, Nigeria. Multistage sampling method was used to select respondents. Data were collected using semi-structured questionnaires administered by trained interviewers. Analysis was carried out using SPSS 20 software. Only 39 (12.8%) had heard about cervical cancer. Knowledge of screening and Human Papilloma virus (HPV) immunization was poor. Most (64.3%) did not consider themselves at risk for cervical cancer. Majority (88.9%) of the respondents were however, willing to undergo screening and 93.8% were willing to take HPV immunization or recommend it to someone. Only 2 (0.7%) had done a cervical cancer screening test. None had taken HPV vaccine and no mother had given their daughters aged 9 years or older, the vaccine. There is thus need for increased awareness creation and health education programmes on cervical cancer prevention.

Keywords: Cervical Cancer, Knowledge, Attitude, Practice, Slum, Nigeria

E12

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**THE MISSENSE c.1169 G>A MUTATION IN *CYP1B1* CAUSES PRIMARY CONGENITAL GLAUCOMA**M.U Khan<sup>1</sup>, H Kaul<sup>2</sup>, R Rehman<sup>2</sup> and S Mahmood<sup>2</sup><sup>1</sup>*Centre for Applied Molecular Biology, University of the Punjab, Lahore, Pakistan*<sup>2</sup>*University of Health Sciences, Lahore, Pakistan***ABSTRACT**

Primary congenital glaucoma (PCG) is the foremost reason of blindness in infants. It occurs due to the inappropriate development of the eye's aqueous drainage system. It has a variable reported incidence with a global occurrence of 1 in 10,000 births but is more prevalent in countries where consanguinity is common. The present study aimed to investigate the mutational spectrum of the *CYP1B1* in local Pakistani patients affected with PCG. This study comprised of 35 unrelated individuals clinically diagnosed with PCG by standard ophthalmological examinations. Genomic DNA was extracted from blood samples of these patients and screened for mutations in *CYP1B1* by amplifying its all coding regions with specifically designed primers. PCR products were purified and Sanger sequencing was performed by using BigDye terminators and capillary electrophoresis. One homozygous missense mutation c.1169 G>A in exon 3 of *CYP1B1* gene was observed in seven patients i.e 20% PCG patients enrolled in the study and it substitutes Arginine with Histidine at codon 390 and all of these patients have consanguinity. In addition a synonymous variant c.1347T>C (18 patients) and two missense sequence variants c.1294G>C (2 patients) and c.1358A>G (4 patients) were also seen in the present study.

Keywords: *CYP1B1*, Mutation, PCG

# **THE ASSOCIATION BETWEEN TUBERCULOSIS STIGMA AND THE IMPLEMENTATION OF DIAGNOSIS PROCEDURE ON TUBERCULOSIS SCREENING PROGRAM IN DENPASAR, BALI, INDONESIA**

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## **ABSTRACT**

The major issue of Tuberculosis (TB) control program in Indonesia including Bali is the low of cases detection rate (32%). Intensified presumptive TB findings through screening program and followed by diagnosis procedure is important. Meanwhile, stigma is a social determinant of health that determine health-seeking behavior. This study aims to assess the association of TB stigma to the implementation of TB diagnosis procedure among presumptive that screen from diabetes mellitus (DM) patients. This is an operational research during the implementation of TB screening program among DM patients. The samples were collected consecutively from January until March 2016 at 11 public health centers (PHC) in Denpasar City, Bali Province. Data were collected through interview using structured questionnaire. Statistical testing using logistic regression. During 3 months screening program implementation, 567 DM patients were screened, 342 of them were presumptive TB and recommended following diagnosis procedure for confirmation. Only 87 (25,4%) follow the procedure while 255 (74,6%) refuse the procedure. The refusal of presumptive TB follow diagnosis procedure is associated to the TB stigma (OR=1.8; 95%CI: 1.1-3.0). TB Stigma is caused by the lack knowledge regarding the important of early diagnosis TB (OR=1.6; 95%CI: 1.2-2.4) and the lack of family support (OR=1.4; 95%CI:1.01-2.0). The implementation of TB diagnosis procedure among presumptive that screen from DM patient were still low. TB stigma is contributed to the high refusal of diagnosis procedure on TB screening program therefore a comprehensive education and increase family support are needed.

**Keywords:** TB Stigma, Diagnosis Procedure, Screening Program, DM Patients, TB Case Findings

E14

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**DRINKABLE TAP WATER: ACCEPTANCE AND ITS INFLUENTIAL FACTORS  
IN BANGKOK RESIDENTS, THAILAND**E Tiyanun<sup>1</sup>, K Harncharoen<sup>1</sup>, S Siri<sup>1</sup> and M Srisuphanunt<sup>2</sup><sup>1</sup>*Department of Epidemiology, Faculty of Public Health, Mahidol University, Thailand*<sup>2</sup>*Faculty of Graduate and Public Health, Western University, Thailand***ABSTRACT**

Although tap water in Bangkok has met the international standards but most of people did not trust that it safe to drink. Demand of bottled water was still increasing. These may result in wasteful infrastructure investment. This study aimed to explore the factors that influence the acceptance of drinkable tap water and its consequence among Bangkok residents. Data for this cross-sectional study were collected via an interview with structured questionnaire from 374 participants. The result demonstrated that there was a high prevalence (51.87%) of the acceptance of drinkable tap water among Bangkok residents. Among them, from the most daily drinking water, 82.99% selected tap water to drink and 9.79% drank water directly from the tap. The factors affected to the acceptance of drinkable tap water were age, occupation, monthly income, campaign perception, personal belief, unacceptable appearance in tap water perception, risk perception, knowledge and attitude ( $p < 0.05$ ). In addition, this study found drinking water selection was not associated with self-reported diarrhea. While we recognized that the cross-sectional study had some limitation, our result offers several points that benefit for water suppliers and public health decision makers to persuade the public to drink tap water which is safe enough for consuming. These will help the public to safe cost from purchase water for drinking and can reduce the pollution from plastic garbage that was a part of global warming problem.

Keywords: Drinkable Tap Water, Acceptance, Perception, Drinking Water Selection, Diarrhea



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## **RICE-BASED FARM HOUSEHOLDS' DIET QUALITY AND DIVERSITY: THE CASE OF CENTRAL LUZON, PHILIPPINES**

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### **ABSTRACT**

Diet quality depends on the variety of foods one consume. This study evaluated the food and nutrient intakes of rice-based farm households and the factors associated with nutritional status of its individual members. Food intake of 953 randomly selected rice-based farm household members was assessed using a three-day 24-hour food recall. Diet diversity and quality were evaluated in relation to the national recommendations. Factors associated with nutritional status based on body mass index were determined. Few children and adults were below the acceptable macronutrient distribution range but a higher % of female adults (19-49y) did not meet the recommended carbohydrate intake. Teenage boys and male adults had more calorie, vitamin A, and iron intakes than girls and female adults. Total per capita carbohydrate intake was mainly from cereals ( $853.49 \pm 368.71$  kcal; 80.79%), sugar and sweets ( $121.63 \pm 118.86$  kcal; 11.51%) while fish and seafood ( $91.49 \pm 75.67$  kcal; 36.48%), cereal ( $68.96 \pm 30.02$  kcal; 27.50%), and meat, poultry and offal ( $54.38 \pm 54.60$  kcal; 21.68%) were the main sources of protein intake ( $250.82 \pm 100.37$  kcal). Total per capita fat intake ( $426.38 \pm 247.54$  kcal) was mainly from meat, poultry, and offal ( $134.92 \pm 37.24$  kcal; 31.64%); oil/fats ( $113.55 \pm 79.94$  kcal; 26.63%); cereal ( $84.79 \pm 148.41$  kcal; 19.89%); and fish and seafood ( $41.60 \pm 38.70$  kcal; 9.76%). Cereals and vegetables were the main sources of iron while vitamin A was mainly from fish and seafood. Household members in a family with more than four members were 3.05 times more likely become underweight than become an overweight and/or obese [AOR=3.05; 95% CI: 1.56, 5.97]. Adults whose iron intake were below the EAR were 3.45 times more likely become underweight than overweight and/or obese [AOR=3.45; 95% CI: 1.54, 7.73]; and 2.0 times more likely have normal weight than become overweight and/or obese. Rice, fish, and meat is the usual diet combination of rice-based farm household members with rice as the major source of energy, protein, and iron. Low diet quality is evident with female children and adults having lower calorie intake than male. Nutrition- and gender-sensitive food-based intervention must be made to improve diet quality and diversity.

**Keywords:** Diet Diversity, Rice-Based Farm Households, Nutritional Status

## EVALUATION OF IRON SUPPLEMENTATION PROGRAM FOR PREGNANT WOMEN IN GUNUNGKIDUL, INDONESIA, 2015

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<sup>2</sup>*Gunungkidul District Health Office, Yogyakarta, Indonesia, Universitas Gadjah Mada*

### ABSTRACT

Iron supplementation program was designed by MoH to prevent anemia during pregnancy. Prevalence rate of anemia among pregnant women in Gunungkidul increased from 14.97% in 2014 to 21.88% in 2015. This study aimed to evaluate iron supplementation program for pregnant women in Gunungkidul in 2015. This was a descriptive study involving 62 respondents from 30 Public Health Centers (PHC) and Gunungkidul District Health Office (DHO) conducted in May-July 2016. Primary data were obtained using checklist sheets, questionnaires and interviews. Secondary data obtained from documents review and DHO's reports. Program was evaluated by comparing indicators of input, process, output and outcome to guidelines and targets. There were qualified human resources (54.84% midwives and 40.32% nutritionist) who worked average 12.8 years, but no iron tablets supply to Gunungkidul DHO at the end of 2015. DHO calculated targets and needs for planning and all PHCs involved midwives, nutritionists and pharmacists in implementation. Coverage of iron supplementation among pregnant women in 2015 (88.77%) exceeded DHO target (82%). The prevalence rate of anemia among pregnant women in 2015 was high (21.88%). Interviews showed most midwives could not ascertain whether the iron supplements actually consumed by pregnant women or not. Overall, the input, process and output indicators showed a good program performance. However as the outcome indicator showed high rate of anemia, efforts need to be put on ensuring the adherence of pregnant women to take all the administered iron supplements. Additionally, DHO needs to ensure the iron supplementation supply through better logistic planning and budgeting.

Keywords: Program Evaluation, Iron Supplementation, Anemia, Pregnant Women, Gunungkidul

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## **RIDING ON THE HEALTH TREND: A MARKET-TO-LAB RICE-BASED FOOD PRODUCT DEVELOPMENT**

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### **ABSTRACT**

Development of rice-based food products increases the income of rice-producing communities, which consequently improves their nutritional status and overall quality of life. This study presents a market-driven approach in developing rice-based food product concepts with added value on health and nutrition. Key aims were to explore and gather insights on consumer trends on food and other health products, and perception and acceptance of rice-based food products. Three focus group discussions (FGD, n=24) were conducted to explore the perceptions on health and wellness of experts in the fields of product development, marketing, nutrition and health, both from the public and private sectors. Market survey (n=339) on the products commonly consumed by the consumers and their interest on pre-identified rice-based product ideas was also conducted in Central Luzon. FGD participants associated health and wellness with nutritious and healthy food products (43.1%). Survey results revealed that commonly consumed products were ready-to-eat pre-packed bakery products (66.9%) for snacks; fast food meals (29.3%) and canned goods (29.5%) for meal items; and ready-to-drink pre-packed beverages (42.9%) and instant coffee (14.7%) for drinks and beverages. Using a likert scale (1-very unimportant to 5-very important), the consumers rated taste (82.9%), nutritional content (75.8%), price (76.4%), aroma (59.6%), packaging (58.7%), and texture (51.3%) as extremely important product attributes. As regards awareness, 98.8% of the survey respondents were aware of rice-based food products and particularly associated these with *kakanin*. Some 51.0-84.7% of the consumers expressed willingness to buy the 16 rice-based product ideas presented if these were available in the market. In summary, current consumer trend on food products tend to gravitate around convenience and health, which should be considered in developing new rice-based food products.

**Keywords:** Consumer Trend, Health, Market Research, Nutrition, Product Development, Rice-Based Products

H9

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**NUTRITIONAL ASSESSMENT OF ADOLESCENTS AND ITS DETERMINANT CO  
FACTORS ‘ SUGAR SWEETENED BEVERAGE CONSUMPTION- SILENT  
CAUSE BEHIND IMBALANCED WEIGHT STATUS AMONG ADOLESCENTS**

B Pallavi and W Neelam

*Jai Narain Vyas University, Rajasthan ,India***ABSTRACT**

Obesity in relation to Sugar Sweetened Beverages (SSB) consumption, a worldwide problem has extensively documented in western countries. Still, Indian data on SSB consumption of adolescents is lacking. Thus, keeping in view the above fact current study recorded nutritional assessment, SSB intake, dietary consumption and milk consumption (assessed through 24 hour dietary recall method) prevalence, locale of SSB (assessed through semi structured questionnaire) among adolescents. Study was conducted at private schools of Jodhpur city (Rajasthan, India) including (600) adolescent aged 13-15 years. Grading of nutritional status was compared with WHO (2007) classification .For selection of categories and classification of SSB'S, NHANES III and NHANES 1999-2004 was referred. Maximum (70%) underweight boys were in 13 years aged. While 9% obese boys and girls were in 14 year aged. Among 15 years obese (20.62%) %boys and (24.60%) girls were consuming maximum dietary calories (i.e.  $1887.5 \pm 67.17$  k.cal/day vs.  $1942.16 \pm 296.94$  k.cal/day respectively). Similarly SSB consumption was also high for boys and girls (i.e.  $443.86 \pm 52.88$  k.cal/day vs.  $443.86 \pm 52.88$  k.cal/day). Positive association was observed between SSB consumption and weight status among boys and girls (i.e.  $R^2 = 0.0238$  for boys;  $R^2 = 0.0641$  for girls). Prevalence of soft drink consumption on a daily basis was reported among all the age group (100%) adolescents. Most preferred place for SSB consumption was home and school. Girls aged 15 years, consumed lesser milk ( $165.49 \pm 128.34$  ml/day) as compared to boys. Study revealed that with advancing age, the caloric intake from SSB has increased among adolescents. SSB consumption has statistically proven impact on nutritional status imbalance.

Keywords: Sugar Sweetened Beverages, Adolescents, Soft Drinks, Obesity

H10

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## CONSUMPTION PATTERN OF OMEGA-3 AMONG PREGNANT MOTHERS

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### ABSTRACT

Docosa hexaenoic acid (DHA) is amongst the essential nutrients for optimum fetal growth and development. DHA deficiency may lead to poor fetal growth affecting mostly the brain and eye development. This research aimed to assess the awareness, knowledge and consumption pattern of omega-3 among Malaysian mothers. This study is a cross-sectional study involving 100 pregnant mothers. Data on demographics was collected together with information on consumption, awareness and knowledge on importance of omega-3 consumption during pregnancy. Majority of respondents were Malay (49%), followed by Chinese (24%) and Indian (17%). Results showed that only 44% of respondents consumed omega-3 supplementation during or before pregnancy. Among these mothers, 26.1% and 28.3% of them started omega-3 supplementation before pregnancy or within a week after pregnancy test respectively, while 39.1% started supplementation within 14 weeks of pregnancy and 6.5% consumed the supplements after 14 weeks of pregnancy. Majority of respondents showed moderate knowledge on sources and benefits of omega-3 consumption during pregnancy (75%), which was then found to be associated with total number of pregnancy ( $p < 0.001$ ), stage of pregnancy ( $p < 0.05$ ) and husband's occupation ( $p < 0.01$ ). Results also showed 89% of respondents were willing to learn more information regarding omega-3. In conclusion, knowledge on omega-3 during pregnancy is significantly associated with number of pregnancy, stage of pregnancy and husband's occupation.

Keywords: Docosa Hexaenoic Acid, DHA, Fetal Growth, Omega-3, Pregnancy

M11

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## BURDEN CAREGIVERS OF PATIENTS WITH MENTAL ILLNESS IN PONOROGO

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### **ABSTRACT**

Introduction: Caregivers of patients with a mental disorders are under the burden of continuous and difficult processes. Determination of the factors related to caregiver burden in mental illness may help find strategies to decrease the burden. This study object to investigating the caregiver burden of patients with mental illness in Ponorogo. Methods: sixty seven caregivers of patients with mental illness in paringan village were include in the study. Sociodemographical data, level knowledge about mental disorders and burden caregivers were observed. Results: The results show that the majority of caregivers have experience that caring for family members with mental disorders should be prepared with physical, psychological and financial consequences.. Recommendation: Nursing care of families by nurses will increase independence of caregiver, so that the patient's condition will improve.

Keywords: Caregivers Burden, Mental Illness, Paringan Village, Nursing

M12

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**OVERVIEW OF STRESS REACTION AND FAMILY EXPERIENCE IN THE CARE  
OF SELF POST MENTAL DISORDERS POST STOCKS**

M Suhron

*Faculty of Public Health, Airlangga University, Indonesia***ABSTRACT**

People with mental disorders where someone who is impaired in mind, behaviors and feelings in the form of a set of symptoms or behavior changes. Based on the preliminary study carried out in January 2017 against nine of ten families got experiences, and family stress reaction given all experiencing high stress. The research objective are to describe picture of stress and family experiences that have people with mental disorders post-stocks. This research method are descriptive with cross sectional approach. Variable research is a stress reaction in families and family experience. Total population 35 respondents. Sampling using total sampling, research instrument used was a stress questionnaire with a total of 0.5019 to test the validity and reliability of 0.789 and a questionnaire with a total family experience test validity 0.774 and reliability 0.5049. The results showed that high family stress as medium as 19 respondents with a percentage (45.70%), and lack of family experience with a percentage of 20 respondents (57.10%), the analysis of research data showed the reaction to high stress and family experience that was lacking in self-care of people with mental disorders post-stocks. Based on the findings of sciences family research of can understand stress and family care on may provide mental a treatment of the member of family who got mental disorders after they are free from stocks.

Keywords: Stress Family, Family Experience, People With Mental Disorders Post Stocks

M13

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**SURVEY ON MEDICARE SERVICES AND AID (FEDERAL-, STATE- AND  
COUNTY-LEVELS) TO KOREAN-AMERICANS WITH A PHYSICAL AND/OR  
MENTAL DISABILITY**

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**ABSTRACT**

Korean-American families often face the issue of being unable to obtain the proper aid and support necessary or available for disabled family members due to various reasons including a lack of awareness about disabilities or because of language barriers. Without knowing much information either about the disabilities or the government-offered health services, Korean-American families (especially new immigrants) experience more challenges in living with family members with a disability. An anonymous survey was designed and distributed to Korean-American communities residing in California, New York and in Virginia in order to evaluate the kinds of federal-, state- and county-level assistance received and the services that the members of the communities are aware of. The survey seeks to put a particular focus on school-provided services and find the relationship between the family members' level of understanding of the government-provided assistance and their quality of life.

Keywords: Physical and Mental Disability, Korean-American Families, Immigrant Health, Medicare, School Provided Services



M14

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## **PREVALENCE OF AND FACTORS ASSOCIATED WITH BURNOUT AMONG HEALTH CARE PROFESSIONALS IN ARAB COUNTRIES: A SYSTEMATIC REVIEW**

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### **ABSTRACT**

Burnout among healthcare professionals is one of the key challenges affecting health care practice and quality of care. This systematic review aims to (1) estimate the prevalence of burnout among health care professionals (HCP) in Arab countries; and (2) explore individual and work-related factors associated with burnout in this population. Multiple electronic databases were searched for studies published in English or Arabic from January 1980 to November 2014 assessing burnout (using the Maslach Burnout Inventory; MBI) amongst health care professionals (HCP) in Arab countries. Nineteen studies (N=4108; 49.3% females) conducted on HCP in Bahrain, Egypt, Jordan, Lebanon, Palestine, Saudi Arabia and Yemen were included in this review. There was a wide range of prevalence estimates for the three MBI subscales, high Emotional Exhaustion (20.0-81.0%), high Depersonalization (9.2-80.0%), and low Personal Accomplishment (13.3-85.8%). Gender, nationality, service duration, working hours, and shift patterns were all significantly associated with burnout. Within the constraints of the study and the range of quality papers available, our review revealed moderate-to-high estimates of self-reported burnout among HCP in Arab countries that are similar to rates in non-Arabic speaking westernized developed countries. In order to develop culturally appropriate interventions, further research using longitudinal designs is needed to confirm the risk factors for burnout in specific HCP settings and specialties in Arab countries.

**Keywords:** Burnout, Emotional Exhaustion, Depersonalization, Personal Accomplishment, Healthcare Professionals, Maslach Burnout Inventory

M15

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**RELATIONSHIP BETWEEN IMPULSE CONTROL AND MENTAL PAIN AMONG  
YOUNG ADULTS STUDYING IN HEALTH COURSES**R.D Sarode<sup>1</sup> and R Khubalkar<sup>2</sup>

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**ABSTRACT**

Health professional courses are found routinely attractive as they provide a lucrative career and higher social status. The course work is highly taxing and demands regular studies and high level psychomotor skills, interpersonal, social and communication skill along with good study skill. Inadequacy of these leads to emotional problems that in turn result in psychological pain among students. Health professional students are expected to possess good impulse control. Impulse control is said to be a major contributor of mental pain. Objective of the study is to assess the relationship between impulse control and mental pain among young adults studying in health professional courses. 400 young adults of four different health professional courses were selected purposively from Nagpur and Wardha districts of Maharashtra, India. Impulse control scale and Orback Mikulincer Mental Pain scale was used for data collection. The results show that Impulse control and mental pain among male  $r = -0.289$ ,  $p < 0.05$  and female  $r = -0.377$ ,  $p < 0.05$ . Young adults are negatively correlated,  $r = -0.337$ ,  $p < 0.05$ . However, female students show greater magnitude of negative correlation as compared with male students.

Keywords: Mental Pain, Impulse Control, Relationship

Y1

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**HYPERTENSIVE PATIENTS AND DOCTORS PERCEPTION ABOUT  
HYPERTENSION AND LIFESTYLE RECOMMENDATIONS IN URBAN AREAS  
OF PAKISTAN: A QUALITATIVE STUDY**

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**ABSTRACT**

Hypertension (HTN) is a chronic disease that has become a growing public health problem in Pakistan. An integral element in controlling HTN is non-pharmacological treatment, which includes: physical activity, smoking cessation, eating a balanced diet, low alcohol consumption and low salt intake. However, multiple factors, cultural values and beliefs interact and make adopting a healthy lifestyle very challenging. The aim of the study is to explore the perceptions of hypertensive patients and doctors regarding HTN and its treatment in urban health clinics of Pakistan. A qualitative exploratory study was designed to explore participant's views in two public hospitals of Pakistan. Thirty semi-structured interviews with hypertensive patients and thirty with doctors were conducted in hospitals along with two focus group discussions with junior and senior doctors. Analysis reveals that patients had knowledge regarding HTN, symptoms and drug treatment. However, none of the patients were fully aware of the role of lifestyle recommendations in HTN treatment. Patients tend to eat fast food due to easy availability and lack of nutritional advice from doctors. Consumption of ghee and salty tea is a common cultural practice. Depending on family members for food preparation and the subsequent lack of control over their diet prevented older patients from being able to make changes to their diets. Patient's cultural practices may override 'expert' advice, therefore doctors need to ensure they appreciate the strength of such daily practices when giving advice. Patient education should include specific details to modify the lifestyle ideally tailored to the patient's personal situation.

**Keywords:** Hypertension, High Blood Pressure, Views, Lifestyle Recommendations, Pakistan, Qualitative Research

## THE IMPACT OF ACNE VULGARIS ON QUALITY OF LIFE IN ADULT PATIENTS

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### ABSTRACT

Acne vulgaris is a chronic dermatology condition involving inflammation of pilosebaceous units. Acne had been reported to impact one's quality of life (QoL) and was associated with depression, anxiety and low self-esteem. Reports of its impact on Malaysian patients were scanty and remains equivocal. This is a cross-sectional questionnaire study involving 225 patients whose age ranged 18 to 40 years old. Presence and severity of acne was diagnosed using Global Acne Grading System (GASS). Patient's QoL was measured using Dermatological Life Quality Index (DLQI). Clinically diagnosed patients' acne severity were mild (n=160, 71%), moderate (37, 16%), severe (20, 9%) and very severe (8, 3.6%). Acne severity differ among gender ( $p<0.05$ ) and correlated negatively with age ( $p=0.015$ ). DLQI scores ranged from 5 to 21 with median of 9. DLQI scores correlated negatively with age ( $p=0.010$ ). Thus, younger patients had more severe acne and more impaired QoL. In addition, acne severity correlated positively with DLQI domains ( $p=0.000$ ); affecting them in ascending order of personal relationships ( $r_s=0.578$ ), work and school ( $r_s=0.701$ ), leisure ( $r_s=0.778$ ), treatment ( $r_s=0.815$ ), daily activities ( $r_s=0.818$ ) as well as symptoms and feelings ( $r_s=0.874$ ). These suggested greater psychological impairments with worsening acne. In this study, male patients were more significantly affected ( $p<0.05$ ) than their female counterparts in symptoms and feelings, daily activities and personal relationships; resulting in higher median for total DLQI score (16 versus 9). Early intervention and effective treatment of acne vulgaris is essential to safeguard patient's psychological well-being especially among younger male patients.

Keywords: Acne Vulgaris, Global Acne Grading Scale, Quality of Life

## **EPIDEMIOLOGY OF POST-OPERATIVE ORTHOPAEDICS IMPLANT INFECTION AND ANTIBIOTICS SENSITIVITY PATTERN IN A TERTIARY CARE HOSPITAL IN DELHI**

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### **ABSTRACT**

**Background:** In the era of antibiotics, post-operative infections in orthopedic implants usually more when an open surgery is performed, thus, exposing the operative site to various contaminants. Once infected, these bear a considerable burden on the patient as well as his family in terms of mental, physical and economic stress.

**Objectives:** To identify the risk factors associated with post-operative implant infection, isolate and identify the bacteriological isolates responsible and their antimicrobial sensitivity from post-operative orthopedic implant infections.

**Materials and Methods:** A hospital based study was carried out in a tertiary care hospital in New Delhi which lasted from February 2016 to February 2017 including 108 patients with post-operative implant infections that were being followed up in Orthopaedics out patient department. Data was collected from infectious disease register consisting of culture sensitivity results. Gram stain and culture were performed; and the isolates were subjected to antibiotic susceptibility testing by Kirby-Bauer disc diffusion method, as per CLSI guidelines.

**Results:** Out of the 108 samples processed, 89 (82%) of specimens showed culture positivity. *Staphylococcus aureus* 40(45%) was the predominant isolate followed by *Pseudomonas* 18(16%), *Escherichia coli* 10(9%), *Klebsiella* 10(9%), *Proteus* 5 (4.5%), *Acinetobacter* 3(2.7%) and *Citrobacter* 3(2.7%). Of the *Staphylococcus aureus*, 11(12.4%) were MSSA and 29(32.6%) were MRSA. Gram negative bacilli were resistant to ceftriaxone (88.3%), ciprofloxacin (65.6%), cotrimoxazole (72.2%) and sensitive to carbapenems and piperacillin-tazobactam. ESBL production is seen in 15(37%) cases of Gram negative bacteria. *Pseudomonas* isolates were susceptible to piperacillin-tazobactam, and meropenem.

**Conclusion:** Increasing Orthopedic implant post-operative infections should be avoided by thorough preoperative evaluations and complete intraoperative sterility along with postoperative antibiotic therapy as per culture sensitivity results. There is a need for formulation of antibiotic policy and formulary restriction.

**Keywords:** Bacterial Isolates; Antibiotic Resistance; Orthopedic Infection; Wounds; ESBL

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## FACTORS AFFECTING BLOOD DONATION AMONG SELECTED SITES IN MANILA, PHILIPPINES

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### **ABSTRACT**

The study aims to determine the demographic profile, risks associated with blood donation and identify the factors that encourage or discourage prospective and experience blood donors to donate blood among selected sites in Manila. A descriptive cross sectional design was used in the study and a combination of systematic random sampling to select the specific barangay in the six districts of Manila and convenience sampling to select the actual respondents from each of the selected barangay as the sampling technique. The total population includes 600 respondents, 177 of them are experienced blood donors while 423 are prospective blood donors. The main reason for donating blood of the respondents are because of family/relatives while the most frequent considerations for not donating blood are medical reasons (25.2%; 151 out of 600) and the absence of opportunities (21.5%; 129 out of 600). There is a low percentage of blood donors in Manila and that majority of the respondents donate blood to help their families or friends.

Keywords: Blood Donation, Experienced Blood Donors, Prospective Blood Donors

## PREVALENCE OF ANABOLIC STEROIDS ABUSE AND AWARENESS OF ITS EFFECTS IN MALE ATHLETES IN BANDAR ABBAS, IRAN

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<sup>1</sup>*Hormozgan University of Medical Sciences, Bandar Abbas, Iran*

### ABSTRACT

The aim of this study was to determine the prevalence of anabolic steroids abuse and awareness of its side-effects among athletes, body builders. A cross-sectional study was conducted on 277 randomly selected males, referred to 20 body building club in Bandar Abbas, Iran. A self-administered questionnaire applied for related data gathering. Data were analyzed by using SPSS version 19, descriptive and analytical analysis, and chi square test. Athletes' mean age was 27.9(±7.9) years and most of them had education of university level (51.4%). In general, 44.4% of participants had used anabolic steroids at least one time and around 32 percent were current consumer. The most common anabolic steroids were diyanabol (25.2%), dorabolin and testosterone (13.0%), stanazol (12.2%), anadrol and oksinandral (8.9 %). The main reasons for taking this medication were beautiful physique (43.5%), body power (18.3%) and achieve championship (16.8%). The most common side effects related to using the anabolic steroids that they declared were breast enlargement (48.9%), liver symptoms (48.6%), psychological disorders (38.8%), akne (37.7%), heart diseases (33.3%), sexual problems (31.9%) and urinary problems (23.6%). There was a significant relationship between athletes' age and anabolic steroids abuse ( $p = 0.04$ ). The findings of this indicating that anabolic steroids abusing seems to be increased and become a public health concern and the awareness of it is not satisfied as well, that implies the need to implement educational programs by health care professionals and sport specialists.

Keywords: Prevalence, Anabolic Steroids, Athletes, Awareness, Iran

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**THE INFLUENCE OF SOCIO-CULTURAL FACTORS ON EARLY MARRIAGE IN  
CIPACING VILLAGE, JATINANGOR SUB-DISTRICT, SUMEDANG DISTRICT,  
WEST JAVA-INDONESIA**

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**ABSTRACT**

The problem of early marriage still occurs in developing countries, both in rural and urban areas. Early marriage can lead to high-risk pregnancy that may increase the risk of maternal morbidity and even maternal and infant deaths. Society's socio-cultural aspects affect the marriage practice because social problems are influenced by the community's traditions and cultures. The purpose of this research is to study the influence of socio-cultural behavior on early marriage in the Cipacing Village, Jatinangor Sub-district, West Java-Indonesia. The method used in this research was the analytical method with cross sectional approach. The sampling used was total sampling that was made up of the entire sample population of 44 people. The data was collected by using questionnaire. The type of data taken was primary data. The data analysis was done by using chi-square test. The results of this research showed that most early marriage occurred at the age of 19-20 years old (56.41%), with junior high education (61.54%), and parents' income of  $\leq$  Rp.1.300.000,- (92.3%). Those early marriage practices came from the individual's socio-cultural behavior (61.54%), family factor (82.05%), and community factor (64.10%). The result of the chi square test put the p value  $0,150 > \alpha 0,05$  and showed that there was no significant influence of individual and community factor on early marriage. While the p value  $0.000 < \alpha 0,05$  showed that there was significant influence of family factor on early marriage. The research concluded that only the family factor posed a significant influence on early marriage because p value  $0.000 < \alpha 0,05$ .

**Keywords:** Early Marriage, Socio-Cultural Behavior (Individual, Family, and Community Factor)



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**DIFFERENCE OF KNOWLEDGE AND BEHAVIOR BETWEEN PREGNANT WOMAN WHO ATTEND AND NOT ATTEND ANTENATAL CLASS PROGRAM IN MAINTENANCE OF PREGNANCY AND CHILDBIRTH PREPARATION AT MEKARGALIH IN JATINANGOR SUMEDANG 2014**

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**ABSTRACT**

Antenatal class is one of the government program in Indonesia which aims to increase knowledge and change behavior in maintenance pregnancy and prepare for childbirth. Puskesmas Jatinangor is one of the health service that have implemented antenatal class in they work area. Mekargalih that have been implementing antenatal class since 2013. In the implementation, total number of antenatal class participants consists of a maximum 10-15 people, so not all of pregnant women are able to participate in antenatal class program. The objective of this research is to know the different of knowledge and behavior between pregnant woman who attend and not attend in antenatal class program. The method used in this research is the analytical method with cross sectional approach. Sampling was done by purposive sampling and accidental sampling. The data is taken from a questionnaire which distributed to 15 pregnant women who attend antenatal class and 15 pregnant women who not attend antenatal class. The results of this research after unpaired t-test analysis on the knowledge p value (0.042) and for behavior after the Mann Whitney test p value (0.020). Conclusions this reseach is for pregnant women who attend antenatal class have knowledge and behavior in the maintenance of pregnancy and childbirth preparation is better than pregnant women who not attend antenatal class.

Keywords: Antenatal Class, Knowledge, Behavior

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**“THEY ARE NOT FRIENDLY AT ALL”: THE INFLUENCE OF HEALTH CARE WORKERS IN ADOLESCENT SEXUAL AND REPRODUCTIVE HEALTH**

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**ABSTRACT**

In southern Africa adolescent girls bear a disproportionate burden of HIV infection, placing them at the epicentre of the HIV epidemic. However, adolescent girls face dual risk: HIV infection and adolescent fertility. In South Africa approximately 2000 adolescent girls and young women are infected with HIV every week and adolescent fertility still remains a persistent problem. The need for adolescent appropriate health care services in South Africa is evident. There is urgency for efficient dual services that cater for this high burden key population. This paper explores the perceptions of adolescent females towards health care workers and facilities in influencing their decisions towards SRH services. The study was conducted at a secondary school in KwaZulu-Natal, South Africa with adolescent girls between the age of 14 and 17 years old. A participatory action research approach was used, which included art-based activities and semi-structured individual interviews. Data were analysed using thematic analysis. The key themes that emerged in relation to their experiences were; disrespectful, judgmental, unfriendly, and unrelatable health care workers; shame and guilt in using SRH services; and breaches in confidentiality and privacy. Findings highlight the need for further adolescent-specific training for health care workers; the use of participatory methodologies in user-engagement in designing, assessing and providing of adolescent friendly services; and the need for further understanding of the culturally specific nuances of health care provision.

Keywords: Sexual and Reproductive Health, Adolescent Girls, Health Care Providers, Access

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**THE EMPOWERING ELDERLY OF EDUCATION ACCOMPANIMENT TO  
REDUCE DISORDER AND ABUNDANT INTELLECTUAL DEPRESSION**

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*University of Jember, Indonesia***ABSTRACT**

Depression was one of mental disorder, it could influence idea's system, feeling, seat of emotions and the method to face daily activity. Abundant depression would result soul and intellectual disorder, elderly people was one of persons who could get depress. Elderly was a group of people that has been live for many years at the end of their age. Depression was concerned by elderly people include of status social alteration, disease increasingly and stand alone decreasingly, it was caused by ripen process.

Empowerment and elderly fasilitation that refers to the concept Active Ageing WHO was process ageing it was settled health as physical, social, mental with the result that could settled prosperous in their life as inhabitants member. The empowering elderly people in the form of continuous education it was direction program to participate or executed by elderly people empowering of contiguous could take place as inwrought with involved various sector and government's administration. And request from various importance manager. The strategy to reach that objects were pay attention in prominent aspect (planning, building or organization, realization, controlling, monitoring and evaluating) so it could be percentage by prominent indicator, quality, quantity and the continuities of elderly people's program.

Keywords: Elderly People, Mental Healthy, Empowering, Productive

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**DRAQONS : CODE BLUE RADIOFREQUENCY IDENTIFICATION CARD-  
ACTIVATED SYSTEM**

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**ABSTRACT**

Code blue activation in hospital using telephone line connected to hospital command control has many possible technical errors. It will delay medical interventions that should be given in chain of survival for patient with cardiorespiratory arrest as soon as possible. A Radio frequency Identification (RFID) technology-based device is made to turn on the code blue alert system within second after the tag in healthcare workers identity card scanned. This device is featured with Wi-Fi module to transmit message on exact location of patient to Wi-Fi transmission-based Signal Receiver Prototype hold by Rapid Response Team responsible for code blue in parallel. This system is making the time interval between the patient first found unresponsive until delivery of advanced resuscitatorial effort shorter and more efficient in operational procedure. By minimizing the time wasted for technical system and focussing the healthcare worker on medical interventions needed will decrease the risk of neurological damage and increase life-expectancy rate of patient with cardiopulmonary arrest significantly.

Keywords: Cardiopulmonary Arrest, Code Blue, In-Hospital Arrest, RFID

**DIABETES KNOWLEDGE, HEALTH BELIEFS AND HEALTH BEHAVIOR  
AMONG HIGH-RISK COMMUNITY OF TYPE 2 DIABETES IN BALINESE  
RURAL AREA, INDONESIA**

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Health Sciences, Hiroshima University, Japan*

**ABSTRACT**

This qualitative study was aimed at understanding diabetes knowledge, health beliefs and health behavior in a diabetes preventive practice among high-risk community on Balinese rural area in Indonesia. The study used applied thematic analysis driven by the Health Belief Model to present the participant experiences. The study involved semi-structured focus groups with 20 participants who were identified as high-risk community of type 2 diabetes. The participants were 10 males and 10 females, with the average age was 49.95 years old, the educational levels were 45% of elementary school, 45% of high school and 10% of junior high school. Three themes formulated from the study are as follows: the diabetes knowledge in community is the representation of socio-cultural belief and low health literacy, whether diabetes is perceived as a life burden or not, the perceived barriers reduce the confidence in preventing diabetes. The main causes of diabetes perceived by participants were divided into black magic and unhealthy lifestyle. Participants have not been able to change their behavior to healthy lifestyle because of the perceived barriers. Socio-cultural beliefs (black magic), low level of education, low level of health literacy and psychological burden are also modifying factors in participant's health beliefs. These findings showed that the limited knowledge on diabetes and health beliefs are both related to health behavior. This study suggests that integrated health promotion regarding diabetes which takes socio-cultural and psychological aspects into account, need to be developed in Bali.

**Keywords:** Diabetes Knowledge, Health Beliefs, Health Behavior, Focus Group, Diabetes Prevention, Type 2 Diabetes

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**BARANGAY (VILLAGE) HEALTH BOARD ASSEMBLIES: A POWERFUL  
STRATEGY TO ENGAGE RURAL COMMUNITIES TOWARDS ENHANCED  
PARTICIPATION AND CHANGE**

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**ABSTRACT**

Some years ago, the usual mode of health information, education and communication (HIEC) is a one-on-one basis such as during a brief encounter with a health worker and a patient/client and small audiences during random health gatherings. In 2014, an executive order issued by the Mayor created 15 Barangay Health Boards to strengthen barangay health governance and HIEC. One significant activity of the Barangay Health Boards is the conduct of quarterly health board assemblies where relevant health issues and challenges are discussed and plans and activities are presented. Topics such as the importance of facility based delivery, pre-natal and post natal check-ups, immunizations, newborn screening, health insurance, healthy lifestyles, non-communicable and infectious diseases, management of dengue and typhoid fever outbreaks, voluntary blood donation and other related topics are presented and discussed. In the 3 years of its implementation, this mode of HIEC in the rural communities has encouraged community participation in health program and activities implementation; enhanced their awareness on health matters; and created a positive change in their attitudes like improving their health seeking behaviour and self-reliance. It has resulted in increased facility based deliveries; maintained zero maternal deaths; low neonatal deaths; improved immunizations; facilitated participation in hypertension and diabetes clubs; increased health insurance utilization; effectively managed dengue and typhoid outbreaks; encouraged a high number of blood donors; and improved tuberculosis detection among others. Further, it has inspired the barangay council to increase their health budgets. Ultimately, it resulted in improved disease management and much better health outcomes.

Keyword: Village, Health, Information, Education, Communication, Assemblies

J10

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**DEMAND ANALYSIS OF OSING COMMUNITY FOR FIRST LEVEL HEALTH  
FACILITY SERVICES AT PROGRAM OF THE NATIONAL HEALTH  
INSURANCE**

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***ABSTRACT***

The outpatient and hospitalizations visits was low in Banyuwangi, Indonesia indicate that community demand to health services still low. The purpose of this study was to analyze the Osing community demand for first level health facility (FLHF) services at Program of the National Health Insurance. Type of this research was analytic using cross sectional approach. The population in this study was the family in the Kemiren village and the Olehsari village of Glagah District of Banyuwangi, Indonesia many as 2,026 households. The sample in this study as much as 60 households (300 family members). Multivariate data analysis using multiple logistic regression test. The results showed that there were two factors that affect demand for health service was a education level factor and knowledge factor ( $\alpha < 0.05$ ). The factors that most influence to the demand for health services was a knowledge factor because it had a value of Exp (B) the greatest as much as 1,188. Based on Osing community demand for first level health facility service then the number of first level health facility in Glagah District was already enough even general physician more one person. While based on the number of Osing community who participated National Health Insurance members then the number FLHF in Glagah District was already enough but general physician least one person. The conclusion that the higher the level of education and knowledge of the community, the higher the demand for health services.

Keywords: Demand Analysis, Health Services, First Level Health Facility, National Health Insurance

## STRENGTHENING PUBLIC HEALTH SERVICES THROUGH EVIDENCE-BASED PRACTICES FOR SAVING MATERNAL LIVES IN REMOTE TRIBAL AREA IN INDIA

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### ABSTRACT

Around 15% of all pregnant women develop life-threatening complications that call for skilled obstetric interventions. There is conclusive evidence that the best strategy for reduction in maternal mortality is to provide emergency obstetric care (EmOC) services within the reach of all pregnant women. **Objective:** To strengthen the public health facility in providing emergency obstetric care services in limited resource settings to avert maternal deaths and develop evidence based replicable model to leverage govt. service utilization. **Methodology:** Baseline assessment undertaken in 2005 to gauge maternal child health indices pointed out the extreme underutilization of public facilities resulting in high maternal deaths. Underutilized public health facility within the catchment population was hence refurbished using private funds to provide round-the-clock EmOC within the facility at no cost to the beneficiaries. The unit functions through systematic, time-tested standardized operating procedures with robust MIS system and strong backward and forward linkages to optimize utilization through resource sharing and minimize delays in accessing EmOC services. The present paper analyses the outcomes of the EmOC interventions for the period April 2013- March 2017. **Results:** The Comprehensive Emergency Obstetric Newborn Care unit conducted 2710 deliveries per annum (SD 205), which constitute nearly 45% of all deliveries that are conducted at all public health facilities in the district. The number of women with complications or high risk (3213) who were treated in the unit reported case fatality rate (CFR) of 0.15% with about 19% of all EmOC needs of the entire district being catered by single facility. The CFR outside CEmONC unit was 1.13 times higher as compared to case fatality of the Comprehensive EmOC unit. Financial estimates of services sought (2013-16) points to an annual savings of INR 29 million among those who sought services from the centre. **Conclusion:** The delivery care and service indicators of the unit suggest that the actual practice of institutional delivery is greatly affected by ease of accessibility and quality of care provided in a health facility. Despite mushrooming of private healthcare providers in tribal areas, it has been observed that by providing quality care, there is an increased utilization of the public health services. Thus, more lives can be saved by increasing skilled attendance at birth and ensuring access to basic and comprehensive EmOC, which will increase the met need for EmOC.

Keywords: Accessible Health Services, Universal Health Care, Emergency Obstetric Care



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## THE INTEGRATED MODEL OF COMMUNITY BASED PUBLIC HEALTH SURVEILLANCE

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### **ABSTRACT**

Communities (health cadres) have a strategic role in surveillance through the recording and reporting of health data. In Indonesia, community participation in surveillance conducted by several different and unintegrated health programs. These conditions have an impact on the quality of the reported data. The objectives of this operational research are to integrate community-based surveillance while also incorporating new data and information needs based on continuum of care. Data collected through document studies and focus group discussions with surveillance officers. Results of new data on integration model are birth planning, early breastfeeding initiation, accidents, adverse events following immunization, risk factors for non-communicable diseases and mortality data. This model integrates existing community-sourced data on maternal and child health programs, infectious disease surveillance and non-communicable disease surveillance. The integration system was also developed for surveillance of school age children by monitoring the symptoms of disease, school attendance, healthy behaviors and healthy schools. Data were collected by health cadres in the community and students at school using the integration form. The data were reported to the puskesmas to be analyzed by surveillance officers at the puskesmas descriptively. The resulting information are the number of high risk delivery, frequency distribution of non-communicable risk factors based on individual characteristic, number of disease symptoms on school age children and trends of monitored health problems.

Keywords: Integrated Model, Community, Public Health Surveillance, Continuum of Care, School-Age Children

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## ACCURACY COMPARISON OF ANTHROPOMETRIC FORMULAS OF HEIGHT ESTIMATION BASED ON SEVERAL LONG-BONES MEASUREMENT IN DEUTERO-MALAY ETHNIC

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### ABSTRACT

Nutritional status can be assessed by knowing the height but because it is often difficult to quantify for example in bedrest patient or abnormal stature, it needs an alternative anthropometric measurement, such as height estimation based on long-bones measurement. Little information is available about the accuracy of these measurement, especially in deutero-malay ethnic. The present study aimed to compare accuracy for estimating height from several long-bones lengths to search an accurate anthropometric formula for deutero-malay ethnic. This study used an observational analytic method with cross sectional approach. The samples are students of Medical Faculty of University of Jember that meet the inclusion and exclusion criteria. Data were analyzed with Kolmogorov-Smirnov test, Pearson Correlation test and linear regression. The method is by measuring height with microtoise and bones length with medline. The result showed strong and positive ( $r > 0.5$ ) correlation between height and length of long-bones, so linear regression can be done. Among ulna, femur, humerus and radius bones, femur formula showed the highest accuracy both in men ( $r_{\text{right}} = 0.904$ ;  $r_{\text{left}} = 0.906$ ) and women ( $r_{\text{right}} = 0.911$ ;  $r_{\text{left}} = 0.900$ ). We conclude that anthropometric formula from estimation of height by length of femur is the most accurate from all formula, thus the most preferable to be used for height estimation in deutero-malay ethnic.

Keywords: Anthropometric Formulas, Height Estimation, Long-Bones, Deutero-Malay

## SEVEN DIMENSIONS OF LEARNING CULTURE: ENHANCING PUBLIC HEALTH PRACTICE THROUGH FORMAL LEARNING

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### ABSTRACT

Continuing Professional Education (CPE) is entering the third era in which education and learning occur in a workplace. The concept of learning in the profession is believed to lead to the improvement of job performance of public health professionals. However, little research has been carried out to gain insight into the motivation to enhance professional development through formal education opportunities in the workplace. **Objective:** This study aims at understanding participation in professional development of public health professionals to enhance their professional development. **Method:** All data were collected using online survey to public health professionals in the database of The Georgia of Public Health Training Center (GPHTC). **Conclusion:** The results of the study suggest that most public health professionals participated in available formal learning opportunities in their organization to advance in their professions. The type of the formal learning opportunities and the reason for participation are vary depending on the type of organization. In addition, the results of the study also indicate that the participants mostly considered the learning culture in their organization as high at individual, team/group, and organizational level.

Keywords: Public Health, Continuing Professional Education

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## ROLE OF THE INSTITUTION OF RELIGION ON LIFESTYLE AND HEALTH BEHAVIOUR: A STUDY OF SIKHISM IN MALASYIA

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### **ABSTRACT**

This study explores influence of Sikh religion on the lifestyle and health behaviour among its followers. The study of religion and health is an incredible promising field of research as it has been considered an important force in shaping social life. Many studies have mentioned positive impact on lifestyle of the people. Thus religious beliefs, prescriptions and practices give a meaning, purpose and guidance to people in their everyday life. This research explores the impact of Sikhism on lifestyle as compared with age-groups, social class and gender. The study also looked in the areas of daily prayers, use of tobacco, alcohol, gambling, importance of religion, dating and religion. The purpose of this study is to find influences of Sikh religion among its followers' lifestyle and health behaviour. The survey was conducted and data collected via three methods: a) an online survey form to obtain data from people who were not visiting Gurdwaras; b) interview the followers who visited the Gurdwaras; c) self-administered forms to those who wanted to answer in an environment conducive to them. The results show that there is a great influence of Sikh religion among its followers and it also shows a positive impact of religion on lifestyle. Total respondents were 336 (males 57% & females 43%). None of the participants mentioned to consume tobacco. 92% did not consume alcohol; 97% were not involved in gambling. Answering the question whether religion affects dating relationship, 40% said it affects, 29% said it doesn't, whereas 31% did not answered the question.

Keywords: Sikhism, Lifestyle, Health behavior, Alcohol, Tobacco, Prayers

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**CULTURE OF CARE AND HEALTH CONCEPT OF POSTPARTUM**

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**ABSTRACT**

Reproductive health focuses on the reproductive aspects of women who consider sexuality and reproductive problems including postpartum treatment. Maternal mortality rates are some indicators. Socio-cultural and demographic factors affect the high mortality of mothers. There are several traditions within society that can negatively affect postpartum. The objective of the study was to describe the culture of maternal care at Wekmidar Community Health Center, Malaka District, East Nusa Tenggara Province. The research design was qualitative research with phenomenology and case study approach. The research informants were postpartum (5 people), birth attendant (3 persons), family (5 people). Data collection by observation and in-depth interview. Data were analyzed descriptive qualitative. The results showed that kinship factors (husband, parent, grandmother) still provide an important role in postpartum care, both in giving advice and decision making who help birth, postpartum and what means of service that will be used, postpartum care in a special house (round house), bathing the puerperal mother with boiling hot water (Tatobi), the body of the puerperal mother is always warm by laying coals on the side or under the bed (roast), postpartum is forbidden out of the round house, abstinence consumption of fish and chicken eggs, should not drink cold water. Conclusion: The traditional practice of postpartum care is done by postpartum mothers, family and midwife for 40 days. Recommendations for midwives are the assistance of birth attendant, family and postpartum counseling.

Keywords: Culture, Concept Health, Postpartum

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## THE EFFECT OF PLAY THERAPY USING CONSTRUCTIVE PLAY METHOD TOWARD SOCIALIZATION SKILL IMPROVEMENT OF CHILDREN WITH MENTAL RETARDATION

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### **ABSTRACT**

Children with mental retardation have problems in communication skills, interaction and socialization skills. One of promising method to improve their socialization skills was play therapy using constructive play method. This study was aimed to analyze the effect of play therapy using constructive play method toward socialization skill of children with mental retardation. The research design was quasy experimental design. The population were the first grade of the elementary student at special needs school in Banyuwangi. The samples were gathered by using total sampling method consisted of 14 respondents based on inclusion criteria which were divided into control and experimental groups. The independent variable was play therapy using constructive play method with lego and dependent variable was socialization skills of children with mental retardation. The data observation was collected and analyzed by using Wilcoxon Signed Rank Test and Mann Whitney U Test with significance  $\alpha = 0.05$ . Results showed that was a difference of socialization skill after the intervention on the experimental group ( $p = 0.025$ ), which can be meant that play therapy using constructive play with lego can improve socialization skills in children with mental retardation ( $p = 0.024$ ). It can be concluded that therapy using constructive play with lego can improve socialization skills in children with mental retardation.

Keywords : Play Therapy, Constructive Play, Socialization Skills, Children With mental Retardation

**CONTESTED *HIJRA* IDENTITIES IN BANGLADESH**

K Leena

*North South University, Bangladesh***ABSTRACT**

*Hijras* form a marginalized and much discriminated group in Bangladesh. They are variously being described as people who are transgender, transsexual, transvestite and intersex. They perform traditionally religious roles in blessings of new born babies and newlyweds, may be hired as dancers and musicians at weddings, but may also be involved in sex work. Recently *hijras* in Bangladesh have been officially recognized as a third gender category. However, the definitions of what a *hijra* is and who belongs to this category vary widely and are heavily contested. For instance, *hijras* are addressed in the official document as “*hijra sex*” and self-identified *hijras* who have visible male genitalia are excluded from special socio-economic programs for this group, which seems to indicate that the government focuses on biological characteristics of *hijras*. Different stakeholders may have different interests in defining a *hijra* in a specific way. Unclear is also how a specific categorisation of *hijra* conflicts or overlaps with other non-dichotomous gender categories, such as lesbian, gay, bisexual, or transgender, or how acceptance of *hijras* as a third gender is perceived by LGBT groups that are not yet recognized or accepted in society. It requires further study to understand how policies, and involved stakeholders, including the *hijras* themselves contribute to the construction of *hijra* identities. Therefore, my research question is: How are *hijra* identities constructed in Bangladesh and what are the influencing factors? To answer this question, policies and practices of different stakeholders – the government, doctors and NGO staff involved in care for *hijras*, LGBT groups and *hijras*– will be analysed, and interviews will be held with representatives to find out what factors have contributed to specific perceptions of *hijra* identity. Overall my discussion will provide a framework for better understanding the construction of *hijra* identities, and by revealing the implicit assumptions concerning *hijra* contribute to the further development of good (health) care for *hijras* in Bangladesh. The field research will take place in Dhaka, Bangladesh between August 2016 and July 2017.

Keywords: *Hijra*, Third Gender, Policy and LGBT

## CONSTRUCTION AND VALIDATION OF AN ACTIVE AGEING AWARENESS QUESTIONNAIRE

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### **ABSTRACT**

The world population is ageing and Malaysia is estimated to be an aged nation in 2030. The Active Ageing Framework was proposed by the World Health Organization in 2002 which served as a guide for policy maker to develop a policy or specific program to ensure the quality of life of the older adult population. The Active Ageing initiative in Malaysia has started many years ago, but less is known about its awareness among the population. We have developed an Active Ageing Awareness Questionnaire (AAAQ) to evaluate the awareness among the adult population. The steps involved in this study include drafting the initial questionnaire based on the Active Ageing Framework and a literature review, content validation by three experts, back-to-back translation by a certified translator, face validation by 5 respondents and test-retest reliability analysis among the convenient adult population (n=81). A 2 close ended questions, 1 open ended question and 22 item questionnaire were developed and analyzed. The mean I-CVI is 1.00, the Chronbach's alpha > 0.7 and the Intra-Class Coefficients for all items ranging from 0.489 to 0.788 indicating fair to good agreement and thus the initial reliability. The AAAQ is a content and face valid, and reliable instrument to examine Active Ageing awareness among the adult population. Further analysis to determine construct validity and to refine the questionnaire is needed. The availability of the questionnaire is useful to determine population awareness and it serves as a first step to promote active ageing in general adult population.

Keywords: Active Ageing, Awareness, Questionnaire, Validation, Older adult, Elderly



## FUNCTIONAL IMPAIRMENTS OF ELDERLY IN RURAL AREAS OF EAST SIKKIM, INDIA: CROSS-SECTIONAL STUDY

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### ABSTRACT

India's ageing population is expected to increase by 12.6% in 2025. As per the United Nation definition of ageing country, India qualifies as an "Ageing Country". The major concern now being the health care of the elderly as functional disability increases with age. Sikkim being the eight and the smallest north-east state of India is characterized by mountainous terrain and consist of around 6.7% of the total geriatric population which is more in rural areas than the urban areas. **OBJECTIVE:** To study the functional impairments of elderly in rural areas of East Sikkim. **METHOD:** Cross-sectional study was carried out on 324 elderly people with age 60 years and above. The elderly was randomly selected from 18 GPUs out of 53 GPU's in rural areas of east Sikkim and then the study was conducted. **OUTCOME MEASURES:** Patient Specific Functional Scale (PSFS) and Lawton's Instrumental Activities of Daily Living (IADL) Scale was used. **RESULT:** Functional impairment was associated more with lower socioeconomic status and low quality of life (QOL). Degree of dependence was related to age, female gender, being single and widowed, and presence of cerebrovascular disease and dementia. **CONCLUSION:** Developing interventional strategies for improving QOL might be a fruitful approach to delay functional impairment in old age and thus enhancing the government and policy makers for forming a comprehensive geriatric rehabilitation services.

Keywords: Functional Impairments, Quality of Life, Elderly, Activities of Daily Living

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**RELATIONSHIP OF DEMOGRAPHIC CHARACTERISTICS, ELDERLY  
POSYANDU MEMBERSHIP, ORGANIZATION ACTIVITIES WITH ABILITY OF  
DAILY ACTIVITY AND INSTRUMENTAL ELDERLY IN SURABAYA CITY**

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**ABSTRACT**

The results of NSES 2008, 2009 and 2012 show that the percentage of elderly population in Indonesia has reached > 7% of the total population. The aging population structure is one indicator of improving the quality of health and social conditions of the community. (Kemenkes R.I., 2013). The purpose of this study was to know the relationship of demographic characteristics, participation of posyandu elderly, organizational activity with the ability of daily activities and instrumental elderly. This research is observational research, cross sectional. The population was all elderly in Surabaya City. The sample was elderly > 60 years old in Tambaksari Sub District. The sample size of 80 people was determined by Multi Stage Random Sampling. Data were analyzed by using spearman correlation test. The results showed that there were correlation between demographic characteristics, elderly posyandu membership, organization activity with ADLs and IADLs ( $p < 0,05$ ). ADLs were activities toilets, feeding, dressing, grooming, physical ambulation and bathing. IADLs include ability to use telephone, shopping, food preparation, housekeeping, laundry, mode of transportation, responsibility for own medication and ability to handle finance. The results showed that these factors can contribute to the ability of elderly activity. Elderly endeavored as the nation's assets. Although to realize the independence of the elderly should be supported by other factors such as health care, social support and mental readiness. The ability of this activity will realize the independence of elderly, healthy and productive elderly amid increasing number of elderly in Indonesia.

Keywords: Elderly, Elderly Activity, Elderly Daily Activity, Productive Elderly

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## **AUSTRALIAN COMMUNITY PERSPECTIVES ON ALCOHOL, SMOKING, AND CANCER: THE LEGACY OF THE SUCCESSFUL TOBACCO CONTROL PROGRAM**

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### ***ABSTRACT***

The International Agency for Research on Cancer classifies ethanol—the intoxicating agent found in beer, wine, and liquor—as a known human carcinogen, locating it in the same category as tobacco. Knowledge and understanding of tobacco-related cancer has been successfully communicated through numerous anti-smoking campaigns and government policy, with consequent reduction in smoking; however, the link between alcohol and cancer risk is relatively unrecognised by the wider community. This research examines how Australian adults described their experience and understanding of the links between both smoking and alcohol on cancer.

We analysed the accounts of 60 focus group participants, aged between 18 and 65, who either self-identified as light-to-moderate alcohol consumers, or who perceived themselves at an increased risk of developing cancer. These participants described numerous health campaigns and government reforms that have successfully contributed to building public understanding about smoking risk. They also highlighted the absence of similar strategies that warn of alcohol-related cancer risk, leading them to challenge the validity of the message that alcohol causes cancer. Tobacco control strategies were presented as the ‘gold standard’ against which alcohol-related cancer risk could be measured. Without similar strategies, it is unlikely that the message that alcohol causes cancer will be accepted as a valid public health message that will prompt behavioural changes.

Keywords: Alcohol, Cancer, Tobacco, Smoking, Health Promotion, Qualitative Methods

## QUALITY OF LIFE OF ELDERLY IN RURAL AREAS OF EAST SIKKIM, INDIA: CROSS SECTIONAL STUDY

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### ABSTRACT

Ageing being the most emerging demographic phenomenon in the world, there is an increase in demand for preventive, curative care and rehabilitation services in India. With around 6.7% of the geriatric population in Sikkim, the elderly population is more in the rural area than the urban area. Of the total population of Sikkim state, around 75.03 percent live in the rural areas. Due to hilly terrain and difficult route, there is dearth of literature on community based study in Sikkim. **OBJECTIVE:** The objective of this study was to find out the quality of life of geriatric population from rural areas who are not able to visit the health care centers most often. **METHOD:** Cross-sectional study was carried out on 324 elderly people with age more than or equal to 60 years. Study was conducted by visiting the Gram Panchayat Units (GPU's). The elderly was randomly selected from 18 GPUs out of 53 GPU's in rural areas of east Sikkim. **OUTCOME MEASURE:** WHOQOL-BREF questionnaire was used for assessing the quality of life. **RESULT:** The physical health, psychological and social relationships quality of life in both genders was found to be poor. There was no significant difference between gender and age variables in quality of life. **CONCLUSION:** QOL of geriatric population of east Sikkim is found to be poor due to the environmental barrier, reduced psychological, social relationships and physical health. Further studies are required to study each component in detail.

Keywords: Physical Health, Quality of Life, Elderly

## PREVALENCE AND PREDICTORS OF ERECTILE DYSFUNCTION IN ADULT MALE OUTPATIENT CLINIC ATTENDEES IN JOHOR

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### ABSTRACT

**Background:** Erectile dysfunction(ED) is a serious burden globally that affects men as well as their partners. **Aim:** To determine the prevalence and predictors of ED among male outpatient clinic attendees in Johor. **Methods:** A cross sectional study of 400 Malaysian men aged 18 and older attending two major outpatient clinics in Johor Bahru and Segamat between January and March 2016 was carried out. Study instrument was a survey form consisting of three sections: Socio-demography and comorbid profile, validated Malay version of the 15-item International Index of Erectile Dysfunction (Malay-IIIEF-15) and validated Malay version of the 21-item Depression Anxiety and Stress Scale (Malay-DASS-21). **Results:** The overall prevalence of self-reported ED was 81.5%. The prevalence of ED according to severity was as follows: mild (17%), mild to moderate (23.8%), moderate (11.3%), and severe (29.5%). Multivariate analysis showed that ED was associated with increasing age (OR=1.051, 95% CI 1.027-1.075), Indians as compared to Malays (OR=3.013, 95% CI 1.187-7.648), tertiary as compared to secondary education (OR=0.476, 95% CI 0.265, 0.854), married as compared to single status (OR=0.137, 95% CI 0.056-0.339), and stress (OR=4.474, 95% CI 1.878-10.656). **Conclusions:** There is significant prevalence and severity of ED among adult male outpatient clinic attendees in Johor. Increasing age, Indian ethnicity, lower educational level, being single, and stress were significant predictors of ED. Targeted interventions on adult males with high risk of developing ED may ameliorate the burden of this disease in Johor. A nationwide screening of adult males for ED together with appropriate intervention studies is highly recommended.

**PREVALENCE OF HEMOGLOBINOPATHIES AMONG SCHOOL GOING  
ADOLESCENTS IN A RURAL BLOCK OF DARJEELING DISTRICT, WEST  
BENGAL, INDIA**

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**ABSTRACT**

**Background :** Hemoglobinopathies are commonest hereditary disorders in India. Hemoglobin E (HbE), in double heterozygous states with beta thalassemia trait may cause thalassemia, a fatal yet preventable disease. Its proven association with Rajbanshis, major ethnic group of this terrain has been well documented. Universally accepted preventive interventional strategies like screening tests for case and carrier detection remains the mainstay. **Objectives:** To determine prevalence of hemoglobinopathies among school going adolescents and find out their association with any defined ethnicity in the study area. Anemia was estimated. **Methods:** Descriptive cross sectional study was conducted from November 2015 to August 2016 in collaboration with Thalassemia Control Unit (TCU), North Bengal Medical College. It was intended to include all students of class IX and X in the government run co-education secondary schools based on their current enrolment status, pertaining to study criteria. 1792 eligible subjects were studied. After ethical clearance and briefing, data was collected from screening camps organized in schools on prefixed dates, using appropriate tools and techniques and analyzed. **Results:** Prevalence of hemoglobinopathies was 44.5%, major variants being HbE (22.6%), beta thalassemia trait (9.8%) and E-beta thalassemia (7.3%). Significant association was found between HbE hemoglobinopathies and Rajbanshis ( $p=.00$ ). 45.2% study subjects were anemic. **Conclusion:** Hemoglobinopathies were substantially high in study area with HbE as commonest variant. Rajbanshis, a majority among study subjects were significantly associated with HbE hemoglobinopathies. Prevalence of anemia was alarmingly high. Planning preventive interventional strategies would ensure appropriate health behaviour of cases and carriers.

Keywords: Screening, Hemoglobinopathies, Rajbanshis, Preventive Strategies

## **PREVALENCE AND ASSOCIATED FACTORS OF LOW-BACK PAIN, PHANTOM LIMB AND RESIDUAL LIMB PAIN IN TRAUMATIC LOWER LIMB AMPUTEES IN KOSOVO: A LONGITUDINAL STUDY**

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### **ABSTRACT**

Low back pain (LBP), phantom limb (PL) and residual limb pain (RLP) in lower limb amputees (LLA) are common conditions. The aims of this study were to analyze the prevalence of LBP, PL and RLP over time and factors associated with them. In study were included 116 patients with traumatic lower limb amputation, living in Kosovo. Patients filled in questionnaire during prosthetic rehabilitation and they were interviewed by questionnaire 10 years after amputation. A questionnaire assessed these questions: patient's characteristics, co-morbidities, duration and frequencies of LBP, PL and RLP and their intensity with- Visual Analog Scale, duration of daily use of their prosthesis, the relationship between LBP, PL and RLP with prosthesis use and daily activities. At ten year evaluation the prevalence of LBP in men was more than in women (OR=1.7), while PL was less frequently present in men (OR = 0.14). The transfemoral amputation was more associated with LBP (OR=3.6) and PL (OR=0.11). As the time since amputation increased the risk of development of LBP increased (OR of < 2years = 3.4) the presence of PL decreased (OR = 0.44 for 1 year). Development of LBP was associated with presence of PL with OR=2.4 and RLP (OR=2.6). A significant difference was found between the functional disability in LLA with LBP ( $t = 3.2$ ,  $p < 0.05$ ) and RL ( $t = 4.1$ ,  $p < 0.01$ ) and those without them. Identifying risk factors of LBP, PL and RLP and assessing an intensity and frequency of them is important to prevent related functional disability.

**Keywords:** Lower Limb Amputees, Low-Back Pain, Phantom Limb, Residual Limb Pain, Prevalence, Functional Disability

## KNOWLEDGE OF PARENTS REGARDING AVAILABILITY OF PNEUMOCOCCAL CONJUGATE VACCINE (PCV) IN ROUTINE IMMUNIZATION PROGRAM TO PREVENT PNEUMOCOCCAL PNEUMONIA

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### ABSTRACT

Around 62% death of under-five children occurred due to infectious diseases in Bangladesh, many of these are vaccine preventable. The country has introduced Pneumococcal Conjugate Vaccine (PCV) in 2015 and this study was conducted to assess knowledge of parents about the importance of PCV in reducing death occurred by pneumococcal pneumonia. Descriptive cross-sectional study conducted two purposively selected slums(Korail and Khilgaon) in Dhaka city involving 150 parents of 0-11 month's children. With written consent, face-to-face interviews were conducted using pre-tested semi-structured questionnaire. Analysis was done using SPSS and Chi square ( $\chi^2$ ) test performed to determine the association. Above 35% parents found aware about PCV, of them 92.5% were informed by service providers and 81.1% mentioned benefit of PCV. Majority of them found not aware of children's PCV vaccination status (Korail-62.7%, Khilgaon-70.7%). Assessment of vaccination card in respect to children's age revealed that 94.2% vaccinated for 1<sup>st</sup>dose, 86.4% for 2<sup>nd</sup> dose and 76.0% for 3<sup>rd</sup>dose. No significant association found between PCV vaccination status with parent's socio-economic status (i.e. education, occupation, income). Parents having awareness of PCV are found to be vaccinated their children and this association was statistically significant for PCV-1 ( $p=0.04$ ) and PCV-2 ( $p=0.00$ ). Above 11% parents did not vaccinate their children with PCV-3 due to other priority works, although this association found significant ( $p=0.02$ ). Having specific knowledge about particular vaccine has implication on vaccination status. Strengthen effort by service providers prioritizing key messages towards PCV, its benefits and adverse-effects can motivate parents and reduce dropout rates.

Keywords: PCV, Prevent, Pneumonia, Knowledge, Parents, Bangladesh



## **FAMILY SUPPORT AND ADHERENCE OF CHEMOTHERAPY PROGRAM BREAST CANCER PATIENTS**

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### **ABSTRACT**

Breast cancer was one of a high prevalence cancer. Chemotherapy was treatment for breast cancer. Chemotherapy affected both physically and psychology, patient tend to boring while doing sustain chemotherapy regiment. Adherence of chemotherapy program related to therapy efficacy. Family support have an important role for chemotherapy successor.

This study aim to investigate the relationship between family support and chemotherapy program adherence in breast cancer patients. The study a descriptive analytical with cross sectional approach. Sample size 83 respondents were taken by concecutive sampling technique. Independent variable was family support. Dependent variable was chemotherapy program adherence for breast cancer patients. Data retrieve with questionnaire and analyzed by Spearman Rho with  $\alpha \leq 0,05$ . The result of study shows significant correlation between family support and chemotherapy program adherence with  $p=0,024$ ,  $r=0,248$ . This concluded that good family support increase chemotherapy program adherence breast cancer patient. Further research suggest to modify research in cohort and case control design study.

Keywords : Family Support, Chemotherapy Adherence, Breast Cancer

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**RELATIONSHIP FAMILY CHARACTERISTIC ON IMPROVEMENT NUTRITION  
STATUS IN TANGERANG DISTRICT, BANTEN PROVINCE, INDONESIA**

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**ABSTRACT**

The influence of family characteristics consist of age of parent, parent education, parent employment status, family income, and child caregivers are contributing factor to increase the risk of child nutrition status. This study is focus to implementation of nutrition program by Human Initiative PKPU in Teluknaga sub-district, Banten Province 2015. The activities nutrition program consist of nutrition training of cadre, health education for mother of children under 5 years and feeding for child from March until November 2015. Mother of children under 5 years was given health education about nutrition and personal hygiene by cadre and project facilitator. Design study that used is cross-sectional with quasi experimental approach before and after intervention to 90 sample study from 6 village. Sample is followed with program intervention for eight months. In base line survey we found 56,7% children with moderately malnutrition and 42,2% with severely malnutrition. After 8 month intervention, there is improvement nutrition status of child. About 22,2% children with normal nutrition status, 58,9% children with moderately malnutrition and 18,9% with severely malnutrition. Statistical test by using paired t-test is meaningful relationship between Z-Score (Weight/Age) status before and after intervention ( $p=0,001$ ). Statistic test by using t-test of age of parent, parent education, parent employment status, family income, and child caregivers result that there is meaningful relationship between child caregiver with improvement of child nutrition status ( $p = 0,008$ ). There is meaningful improvement before and after intervention and child caregiver is contributing factor for it.

Keywords: Nutrition Program, Family Characteristic, Child Nutrition

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## **AWARENESS, KNOWLEDGE AND ATTITUDES OF ARTISANS ON SEXUALLY TRANSMITTED INFECTIONS; A CROSS-SECTIONAL STUDY OF THE ASHANTI REGION, GHANA**

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### **ABSTRACT**

This study seeks to ascertain the knowledge and attitudes on sexually transmitted infections (STIs) among artisans in the Ashanti region of Ghana. A descriptive cross-sectional design was used. Using a two-stage sampling technique, a total of 500 participants mainly masons, auto-mechanics, hairdressers, and dressmakers were recruited. Structured questionnaires were used for data collection through face-to-face interviews. Majority of participants were Junior High School graduates (65.6%). Condom use (46%) and faithfulness to sex partner(s) (50%) are personal actions taken by participants to avoid STIs. Awareness of STI types are high for gonorrhea (98.6%), syphilis (87.8%), HIV (84.8%), hepatitis (71%) and chlamydia (63%) but very low for HPV (4%) and others. Popular symptoms known to participants are the ones related to the genitals – genital ulcer, burning sensation, genital discharge/odour and genital itching. Unprotected sex was identified as the surest mode of transmission (96%) while herbal medicine (34%) is the next best option for STI treatment after hospital/clinic (76.4%). Moreover, television and radio are the most preferred sources of information. Artisans knowledge on STIs is generally good yet limited in specific dimensions such as emerging STI types. Moreover, their knowledge is not devoid of misconceptions, including sharing of toilet seats as a means of STIs transmission, candidiasis as a type of STI. Again, some attitudes and practices contrast the level of knowledge they depicted. More STIs interventions should focus on comprehensive knowledge building among artisans.

**Keywords:** Artisans, Sexually Transmitted Infections, Ghana, Knowledge, Attitude

**PREVALENCE AND PREDICTORS OF FEMALE SEXUAL DYSFUNCTION IN  
ADULT MARRIED AND SEXUALLY ACTIVE FEMALE OUTPATIENT CLINIC  
ATTENDEES IN JOHOR BAHRU**

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**ABSTRACT**

**Introduction:** Female sexual dysfunction (FSD) is a highly prevalent sexual health problem among women globally. In Malaysia, only a few studies have examined the prevalence and risk factors of FSD among married and sexually active women attending primary healthcare facilities. **Aim:** To determine the prevalence and predictors of FSD in adult married and sexually active female outpatient attendees in Johor Bahru. **Methods:** A cross sectional study of Malaysian females, who were married and sexually active, attending a major community clinic in Johor Bahru between January and March 2016 was carried out. A total of 274 subjects were recruited via simple random sampling. Study instruments for the survey included sociodemography and clinical profile, validated Malay version of the 19-item female sexual function index (M-FSFI-19) and validated Malay version of the 21-item Depression Anxiety and Stress Scale (M-DASS-21). **Results:** The prevalence of self-reported FSD was 28.1%. The prevalence of FSD based on age groups (years) are as follows: 21-29 (14.6%); 30-39 (18.5%); 40-49 (27.8%); 50-59 (38.1%); 60-74 (53.4%); >74 (28.1%). 43.8% of the respondents suffered from desire problems, followed by 27.4% with satisfaction issue, 26.6% with arousal disorder, 24.1% with lubrication and/or pain issues and 19.7% with orgasm disorder. Age (adjusted OR: 3.145, 95% CI: 1.760, 5.617; p=0.000), lack of exercise (adjusted OR: 2.112, 95% CI: 1.193, 3.739; p=0.010) and anxiety (adjusted OR: 2.438, 95% CI: 1.382, 4.302; p=0.002) are independent and significant predictors of FSD. **Conclusion:** There is a significant prevalence of FSD and its components among adult married and sexually active female outpatient clinic attendees in Johor Bahru. Age, lack of exercise, and anxiety are significant and independent predictors of FSD. Appropriate intervention for married and sexually active females at high risk of developing FSD may address the risk in disease burden in Johor Bahru. A nationwide screening of adult married and sexually active females for FSD together with appropriate intervention is highly recommended.

Keywords: Prevalence, Predictors, Female Sexual Dysfunction, Outpatient Clinic, Johor Bahru

# **POSTER PRESENTATIONS**



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**TACKLING THE BURDEN OF ALCOHOLISM IN SOUTHWARK**

B Ikram

*King's College London, UK***ABSTRACT**

Southwark is the fourth largest and one of the most deprived of the inner London boroughs. Compared to the regional and national average, Southwark has significantly higher rates of alcohol-related recorded crimes (including violent crimes and sexual offences) and alcohol-related hospital admissions. In 2010, the local council published its first alcohol strategy which aimed to promote safe drinking, reduce alcohol related crime, tackle the social impact of alcohol, and increase the effectiveness of addiction services in the borough. The recommendations in the strategy were implemented from 2012 to 2015. The effectiveness of the strategies implemented by the council was determined using data from Public Health England. Liaising with police, domestic violence services, and health authorities to increase the identification of dependent drinkers and improving access to substance misuse services has been successful in decreasing the rate of alcohol related crime and violence, and the mortality rate for alcoholic liver disease. Southwark's alcohol strategy has the potential to be implemented in other boroughs with high rates of alcoholism. However, the primary goal of any alcohol strategy, according to guidelines from the National Institute for Clinical Excellence, is to create a culture where safe drinking is the norm and this cannot be achieved unless local strategies are complemented by national policy.

Keywords: Alcoholism, Crime, Public Health, Addiction

## **EBOLA: EMERGENCY PREPAREDNESS AND PERCEIVED RESPONSE OF MALAYSIAN HEALTHCARE PROVIDERS**

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### **ABSTRACT**

National preparedness and response to potential EVD importation into Malaysia is vital to mitigate the negative impact not only on health but also on economic and social aspects. Therefore, it is of utmost importance for healthcare professionals to be fully aware of Ebola preparedness and response measures should an outbreak occur in Malaysia in order to quickly and efficiently contain the outbreak. For this, the Malaysian health care professionals 4 categories (general practitioners, pharmacists, nurses and dentists) were considered in the study as these are the professionals who may handle the Ebola cases directly. The targeted population were, those who working in private health clinics of Malaysia. Selection of sample was based on location and designation. Four states in Malaysia were selected out of 13 states based upon the suspected cases of Ebola reported in Malaysia. A total of 645 health care providers completed the study resulting in a response rate over 98 percent. More than 50% of them were female. Majority of the sample pooled were in the age range from 31 to 40 years. Malaysian health care providers are mentally prepared and believe they can response at any moment in case of Ebola outbreak in this county. Though health care providers like dentists and doctors, lack time to read literatures they are not behind the par from nurses and pharmacists.

**Keywords:** Ebola, Preparedness, Response, Malaysia, Healthcare Providers



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## IMPACT OF MENTAL HEALTH IN GOVERNMENT OFFICIALS AND FARMERS AFTER CARCASS DISPOSAL IN KOREA

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### ABSTRACT

The infectious diseases in domestic animals including foot and mouth disease and avian influenza have occurred repeatedly in Korea every year since 2010. Carcass disposal are being implemented to prevent the spread of livestock epidemics. The government is managing the leakage of environmentally harmful factors from carcass disposal site to nearby soil and ground water. However, there is relatively little interest in the mental impacts of human. Therefore, we conducted survey on the mental health impacts on government officials and farmers who had experienced carcass disposal. To survey the concerns of health impacts, a questionnaire survey was conducted in general public (300 people), in livestock burial residents (200 people), in government officials (101 people) and in farmers (110 people). In addition, the questionnaire of Impact Event Scale-Revised (IES-R-K) was used to survey the post traumatic stress disorders (PTSD) in farmers and government officials. More than half of the general population, farmers, and livestock burial residents were concerned about the health impact due to carcass disposal. They needed to care the mental health after the establishment of carcass disposal sites. In addition, eighty two percent of farmers and 14 % of government officials were surveyed with severe PTSD (full PTSD group). The full PTSD group in famers and government officials were significantly correlated avoidance, invasion, hyperarosal, sleep disturbance. In conclusion, it is necessary to manage the human mental health because carcass disposal could produce mental trauma.

Keywords: Carcass Disposal, Post-Traumatic Stress Disorder, Government Officials, Farmers

## SMOKING IN PREGNANCY: PREVALENCE AND TRENDS OVER THE LAST 10 YEARS IN AUSTRALIA

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### ABSTRACT

**Introduction:** Tobacco smoking in pregnancy is the most important preventable cause of harm to both mother and unborn child. Cigarette smoke contains numerous toxic and carcinogenic compounds which include carbon monoxide, nicotine, polycyclic aromatic hydrocarbons, lead and mercury. **Methods:** This retrospective study was conducted at Maitland Hospital, a regional hospital in Australia from 2007 to 2016. Inclusion criteria include delivery at Maitland Hospital, singleton and multiple pregnancies,  $\geq 34$  weeks gestation and known smoking status during pregnancy. Expecting mothers were asked about their smoking status at the first and subsequent antenatal visits. A total of 15806 pregnancies were included and 130 pregnancies were excluded from evaluation. **Results:** The pregnancy smoking rate between 2007 and 2016 were 23.9%. The rate decreased from 28.8% in 2007 to 21.8% in 2016 with Risk Ratio 0.91, 95% CI (0.87-0.95),  $p < 0.0001$ . Smoking rates for mothers age  $<20$ , 20 – 29, 30 – 39 and  $\geq 40$  was 40.9%, 24.1%, 20.0% and 23.7% respectively. Teenage mothers are more likely to smoke compared to mothers age  $\geq 20$  with Risk Ratio 1.31 (95% CI) 1.25 - 1.38  $p < 0.0001$ . The risk of late preterm delivery was 7.4% for smokers and 4.9% for non-smokers. Risk ratio 1.03, 95% CI (1.02 – 1.04)  $p < 0.0001$ . The mean birthweight at term for smokers was 3296 gm compared to 3564 gm for non-smokers. **Conclusion:** Smoking rates in pregnancy has steadily decline in the past decade.

Keywords: Pregnancy, Smoking, Rate, Prevalence, Australia

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## **HIGH BODY FAT PERCENTAGE AMONG ADULT WOMEN IN MALAYSIA: THE ROLE OF LIFESTYLE**

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### **ABSTRACT**

Obesity and its related health risks are becoming prevalent especially among adult women in Malaysia. Body fat percentage is regarded as one of the most important measurement for diagnosis of obesity. The aim of this study is to determine the association of lifestyle and high body fat percentage among adult women in Malaysia. The study was conducted on 327 adult women, aged 40-59 years, recruited during a community health screening program at multiple designated venues. Data on socio-demography, dietary intake and physical activity were collected through validated questionnaires. Body fat percentage (BF%) was measured using InBody 270 Body Impedance analyzer machine. BF% was classified according to cut off points by Gallaher et al. (2000). Association between lifestyle factors and body fat percentage were investigated using multiple linear regression, adjusted for age and body mass index (BMI). The prevalence of high BF% was 72.8%. The mean BF% among the studied participants was  $38.2 \pm 8.2$ . Lower intake of protein ( $B = -0.018$ ;  $p < 0.001$ ), calcium intake ( $B = 0.001$ ;  $p < 0.05$ ) and lower total intensity of physical activity ( $B = -3.973E-5$ ;  $p < 0.05$ ) are the predictors of high BF% among adult women. Almost three quarter of Malaysian adult women have high BF% which indicates unhealthy lifestyle. Development of preventive measures and behavioral changing strategies is paramount to curb undesirable health related outcomes among women.

**Keywords:** Lifestyle, Body Fat, Women, Dietary Intake, Physical Activity, Malaysia

## DEVELOPMENT OF STROKE PREVENTIVE CARE MODEL FOR OLDER PERSONS IN A PRIMARY CARE CONTEXT

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### ABSTRACT

Stroke was the second leading causes of sudden death and the main cause of long term disability in older persons. Health and social care services for stoke persons are more focused on developing stroke fast track rather than preventive care services. This action research aimed to develop stroke prevention model for older persons in a primary care context. The study was conducted at a primary care center from October 2015 to September 2016. The study included three steps: first step was situational analysis, second step was development process; and third step was a model synthesis. In-depth interview, focus group discussion and observation were used for qualitative data collecting from 43 stakeholders that selected from purposive sampling. Content analysis was used for data analysis. Findings from three steps were: 1) the situational analysis of existing care services for older persons with stroke revealed that stakeholders focused on curative rather than stroke prevention; 2) The development of stroke care services towards three levels of stroke prevention were conducted via the collaboration of health, social, and community care sectors; 3) The model synthesis revealed “the integrated stroke preventive care service model” comprising of, awareness raising, NCDs clinic service, stroke warning sign management, stroke fast track service networking, and continuing care. The integrated stroke preventive care service model should be developed in order to provide proactive care services for older persons with stroke in community at the primary care unit level.

Keywords: Model Development, Older Persons, Primary Care, Stroke Prevention

## EFFECT OF WEIGHT MANAGEMENT PROGRAM THROUGH COMMUNICATION SOFTWARE APPLICATION OF MOBILE PHONE AND FACE-TO-FACE

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### ABSTRACT

Introduction: Obesity is a major health problem in the world. There is difference ways to prevent obese, including short-term weight management program and weight control application of mobile phones. The aim of this study was compared face-to-face program with communication software application of mobile phones (Line) on weight and body composition change. Methods: The subjects volunteered to join the face-to-face program (G-I) or Line program (G-II) from July 2016 to October 2017. The excluded criteria were losing anthropometry data, and not full attendance. The G-I subjects received 8 weight management course and 6 exercise classes in two months. The G-II subjects were requested to upload the picture of meals, and dietician gave advice in one month. All statistical analysis was conducted using SPSS 19.0. Result: Ten subjects were included in each group. The mean body weight of G-I in baseline was  $84.7 \pm 19.0$  kg, and G-II was  $72.2 \pm 9.2$  kg ( $p = 0.078$ ). The mean of weight change in G-I was  $-2.2 \pm 1.5$  kg, and G-II was  $-1.8 \pm 1.6$  kg ( $p = 0.550$ ). The mean of body fat percentage change in G-I was  $-0.7 \pm 0.5\%$ , and G-II was  $-0.8 \pm 0.5$  kg ( $p = 0.757$ ). There was no significant difference between two groups in weight change and body fat percentage change by independent  $t$  test. Conclusion: Both of face-to-face weight management program and communication software application of mobile phones were effective strategy to weight control.

Keywords: Obesity, Weight Management, Communication Software, Diet Control, Diet Education

## INTER-RELATION BETWEEN THREE MEASURES OF HEALTH INEQUALITIES IN INCIDENCE, PREVALENCE AND MORTALITY RATES OF CARDIOVASCULAR DISEASE

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### ABSTRACT

Low socioeconomic status (SES) has been well associated with cardiovascular disease (CVD) mortality, whereas its associations with CVD morbidity are rather inconsistent. The aim of this study is to investigate whether SES-dependent selective mortality leads to high inequalities in mortality rate and at the same time low socioeconomic gradient in CVD prevalence. We derived the data of 86,962 employed males from the Korean National Health Insurance Service cohort. Then, data were excluded for those with prior history of CVD at 2002-2003 or age  $\leq 30$ . We analyzed and compared prevalence, incidence and mortality according to SES in three distinct CVDs, stroke, myocardial infarction (MI), and hypertension, representing fatal versus non-fatal characteristics, for 9-years follow up period (2004-2012). SES gradients were estimated based on employee's health insurance premium using age-adjusted logistic regression model. Socioeconomic gradients were generally larger for mortality than prevalence or incidence, especially in the case of stroke. Differentials in incidence and prevalence were only observed for the lowest income quintile in case of stroke and hypertension. Furthermore, socioeconomic gradients in incidence and mortality rates amplified along the follow-up period; consistently larger Odds Ratio (OR)s in 2012 (e.g., OR=2.34(1.34-4.11 for lowest quintile of MI mortality)) than in 2008 (Corresponding OR=1.55(0.60-3.96)). Overall, no or weak socioeconomic gradient in CVD prevalence may be due to direction of incidence associating with socioeconomic status overturning at later life, and partly because of selective mortality.

**Keywords:** Cardiovascular Disease, Socioeconomic Inequalities, Incidence, Mortality, Prevalence, National

## ECONOMIC ANALYSIS OF HOUSEHOLD FUEL IN INDIA WITH PSEUDO-PANEL TECHNIQUE: AIM TO REDUCE INDOOR AIR POLLUTION

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### **ABSTRACT**

More than 70% of people in India are still exposed to Indoor Air Pollution due to using solid fuels such as firewood and dung cake for daily cooking. Although many studies demonstrate the positive impact of switching to clean fuels on health condition, few studies have considered how to make them switch their fuels from the economic perspective. Thus, the purpose of this study is to elucidate the factors that have an influence on the quantity of fuels purchased by household and verify how much the current government policy has an effect on reducing Indoor Air Pollution. This analysis applies a consumption theory in microeconomic field, two-stage budgeting LES-AIDS model, using household data of nearly 500,000 samples in India. The key point is to create pseudo-panel data from cross-sectional data to grasp household behavior dynamically and take account of invisible confounding factors. The model is estimated for rural and urban separately given the huge difference on energy consumption between the two areas. The result shows that being among schedule caste group increases 2.5% expenditure share for firewood, which means caste system steadfastly remains in India. In rural area, own-price elasticity of LPG is significantly elastic; 1% decrease of LPG price leads 2.82% increase of expenditure share for LPG. However, a simulation with the estimated parameters reveals that the current subsidy system for purchasing LPG has few impacts on household consumption of LPG. This implies that more generous supports are needed in order to save poor people from Indoor Air Pollution.

Keywords: Indoor Air Pollution, India, National Sample Survey, Pseudo-panel, LES-AIDS Model, Fixed Effect Model, SUR, Fuel

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## **EVALUATING BIOSTATISTICAL COMPETENCIES FOR MEDICAL STUDENT : THE BENEFITS OF A BIOSTATISTICS CENTRE DEVELOPMENT**

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### **ABSTRACT**

Biostatistics represents a critical methodological skill for medical and health researchers, as statistical methods are increasingly a important part of medical and health research. The need for medical and health researchers to understand the process of statistical investigations and be able to plan statistical inquiry in medical and health related decisions justifies the ongoing integration of biostatistical training into medical institution educational settings. In this respect, Faculty of Medicine University of Muhammadiyah Malang (FMUMM) initiate to develop Biostatistics Center for Medical and Health Research (BCMHR) to help bridging the gap between medical and health sciences researchers and the understanding of biostatistics that could justify the disinterest of medical and health sciences students. Thus there exists a need to investigate the difference of biostatistical competencies between medical students who collaborated with BCMHR in their research and the others who not collaborated with. A cross sectional study was conducted on 221 medical student in FMUMM. The study subjects were distributed questionnaire that consisted of 20 question which related to the knowledge regarding the practice of biostatistics among the study subjects. The result of medical students who collaborated with BCMHR were significantly higher than those who not collaborated with ( $p = 0,0000$ ). This indicating the benefits of a biostatistics centre development in medical faculty that can help medical student to develop a conceptual understanding of statistical ideas and their applications. Suggestions for improving the research policy include working in conjunction with BCMHR and incorporating biostatistics into Evidence-based Medicine (EBM) practise and curriculum.

**Keywords:** Biostatistics, Statistics, Evidence-Based Medicine, Research, Methodological Skill



## ASSESSMENT OF MICROBIAL CONTAMINANTS AND WATER QUALITY FROM RESIDENTIAL SWIMMING POOLS IN AMPANG DISTRICT

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### ABSTRACT

Swimming is one of the popular sports and water activities in many countries including Malaysia. This activity can be performed in swimming pools, rivers, lakes, beaches as well as the water parks. Nowadays, the swimming pools not only exclusively built in hotels, but also built in residential areas such as in the condominiums and apartments. Poor water quality monitoring and poor hygienic practices among swimming pool users can increase the risk of getting recreational water illnesses. The aims of the study are to determine the prevalence of selected pathogens and the quality of water from swimming pools in the Ampang district area. The water samples were collected from 33 swimming pools located in the condominiums, apartments and hotels in Ampang. Water was taken at 20 cm beneath the surface and place in the 500ml sterile containers before transferred to the laboratory in a cool box. The biochemical parameters and the bacterial contamination were determined using a standard method for examination of waste and wastewater. It was found that 8 (24%) swimming pools were positive for fecal coliform (mean value of 29.2 most probable number (MPN) /100ml). Of these 8 swimming pools, 5 (62.5%) were positive for *Escherichia coli* (mean value of 6.6 most probable number (MPN) /100ml) and 3 (37.5%) were positive for *Pseudomonas aeruginosa* (mean values of 8 colony forming units (cfu) /100ml). Two swimming pools were positive for both microorganisms. These contaminated swimming pools also found to have a low free chlorine level and low pH. Therefore, it was concluded that there is a need to monitor swimming pool water quality consistently and maintain the adequate chlorination to prevent the transmission of waterborne diseases.

Keywords: Swimming, Swimming Pool, Water, Ampang District

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**IMPROVEMENT OF LABORATORY SERVICES QUALITY OF OUTPATIENT  
INSTALLATION AT SEMEN GRESIK HOSPITAL BY QUALITY FUNCTION  
DEPLOYMENT (QFD) METHOD**

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**ABSTRACT**

The quality assessment in the hospital is very essential to conduct. In 2014 the patient satisfaction at the Outpatient Wards of Semen Gresik Hospital was low with average of 73.75% compared to the Minimum Service Standard of Hospital (SPM-RS) of ( $\geq 90\%$ ). This research aimed to formulate a recommendation to the service quality improvement at the Outpatient Wards of Semen Gresik Hospital by using Quality Function Deployment (QFD) method. This research was an analytical observational study which used the cross sectional method in the data collection. This research was conducted from April to September 2015. The respondents of this study were patients who had received services more than twice at the Outpatient wards of Semen Gresik Hospital. The result of this study from the QFD method is House of Quality of Laboratory Services at the Outpatient Installation of Semen Gresik Hospital. The study conclusion which is the first priority of Customer's Needs of Laboratory services is the quicker result waiting time at the laboratory. Recommendation given are improving the supervision roles, conducting the evaluation of result waiting time Standard Operation Procedure (SOP), improving the staff competency, optimalizing the facilities and making laboratory notice at the Outpatient Installation.

Keywords: Quality Function Deployment, Laboratory, Outpatient's Installation, Customer Service

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## A STUDY ON THE EFFORT OF SMOKING AND DRINKING PREVENTIVE EDUCATION AT THE NIGHT HIGH SCHOOL STUDENTS IN JAPAN

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### ABSTRACT

The night high school students in Japan have few opportunities to continue receiving and learning health education in the current situation. Many of them were unable to go to school due to school refusal and various reasons. This causes smoking and/or drinking rate tend to be higher in the night high school students than in the daytime high school students. Preliminary study showed that the same tendency was seen at the night high school where there were many students who have smoking and/or drinking experience indicated from daily observation. The purpose of this research was to prevent students from smoking and drinking at the night high school. The smoking and drinking preventive education was implemented from 2014 to 2015 as the school program. The method of this research was cross-sectional to measure smoking and drinking tendency on the night high school students before and after preventive education. Total subjects were 31 males with the average age  $15.29 \pm 0.52$  years old. The percentage of subjects who said "I think to suck" regarding the possibility of smoking in the future, was decreased to 13.7% after preventive education. Likewise, regarding the possibility of drinking in the future, the percentage of subjects who said "I want to drink" was decreased to 5.4% after preventive education. Based on these results, it was inferred that implementing repeated preventive education will prevent smoking and drinking behavior in night high school students.

Keywords: Preventive Education, Night High School, Smoking Prevention, Drinking Prevention, Repeated Education

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## CONTRACEPTIVE SWITCHING PATTERN AMONG MARRIED WOMEN IN EAST JAVA

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### **ABSTRACT**

Switching of contraceptive methods contributes to high unplanned pregnancy rates, if the switching of contraceptive methods not rational, effective and efficient. The aims of this study was to analyze the suitability of switching contraceptive method based on age, contraceptive purposes and number of children. This cross-sectional study was conducted on 4705 married women. The results showed that 84.4% of women had incompatible patterns of switching of contraceptive methods. 67.4% of women over the age of 35, 57.9% of women who aim to limit their pregnancies, and 68.9% of women with two or more children switched to other contraceptive methods, but still in the non-long-term method category. Perceptions of contraceptive cost is the most dominant factor affecting the incompatible patterns of switching of contraceptive methods. Meanwhile, the source of services is a confounder factor in the relationship between perceptions of contraceptive costs and incompatible patterns of switching of contraceptive methods. Women who want to change contraceptive methods need accurate advice from the health providers about contraceptive method to make effective choices.

Keywords: Contraceptive Switching, Contraceptive Method, Pattern Switching

## THE EFFECT OF FOREST BATHING ON PSYCHOLOGICAL AND PHYSIOLOGICAL FUNCTIONS IN PARTICIPANTS WITH DEPRESSIVE TENDENCY

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### ABSTRACT

Recently, attention has been paid to the effect of forest bathing as an effective tool for health promotion. We investigated the effect of forest bathing on psychological and physiological functions in the participants focusing on the presence of depression. In rural Japan, 27 participants aged 39.4±13.1 yrs. were examined during the exposure to forest environment for two days. Their health-related QOL (SF8), depressive status (K6), mood/emotion profile (POMS), blood pressure (BP), pulse rate (PR) and autonomic nervous function in terms of heart rate variability (LF/HF and HF) were measured before and after the forest bathing. The changes in these parameters were examined and compared between the groups with and without depressive tendency. As for mental health condition of the participants, 44.4% (n=12) had depressive tendency (K6 ≥ 5 points). The overall QOL was lower in a depressive group than those without depression. The POMS scores in the group with depressive tendency also showed significantly lower before forest bathing, but the degree of improvement was more remarkable after forest bathing. In both groups, BP, PR and LF/HF (sympathetic function) gradually declined, and HF (parasympathetic function) tended to increase during forest bathing as well. PR decreased significantly in a depressive group, whereas HF significantly increased in the group without depression. Mental health status was lower in the participants with depression, but the degree of improvement was more evident in depressive subjects. These results suggested that psychological improvement by the forest bathing may be effective, especially in subjects with lower mental health.

Keywords: Forest Bathing, Mental Health, Health Promotion, QOL, Autonomic Nervous Function

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## JUDGMENTS REGARDING ORDER AND DISORDER IN PERCEPTUAL ORGANIZATION OF STATIONERY ON A TABLE

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### **ABSTRACT**

Tidying up which is the returning of an object to its proper location is also very important from the public health. In this study, I investigated the relationship between the layout of objects placed on a table and organizing the objects. In developing a system for tidying up tables through the cooperation between a robot and a human, it was necessary to identify table-tops that people consider to be untidy. Therefore, experiments were conducted in which participants were asked to evaluate the degree of order seen in images of tables that were presented to them. Participants were also asked to indicate the number of groups into which the objects on the table could be separated. The results indicated that objects organized into fewer groups were rated as tidier than objects organized into a more groups.

Keywords: Tidying Up, Order, Disorder

## THE EFFECTIVENESS OF *DOKTOR MUDA* AS PEER EDUCATOR: HEALTH KNOWLEDGE, ATTITUDE AND PRACTICES OF PRIMARY SCHOOL CHILDREN IN MALAYSIA

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### ABSTRACT

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

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

## DO MOTHERS' AUTHORITATIVE PARENTING STYLE AND MINDFULNESS AFFECT THE PROBLEMATIC BEHAVIORS OF PRESCHOOL CHILDREN?

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### ABSTRACT

This study aimed to examine factors, which could reduce the problematic behaviors of preschool children. A total of 246 mothers with children aged between three and six years were recruited. A survey method was used to collect data regarding the types of children's problematic behaviors (an attention-deficit hyperactive behavior, socially withdrawn behavior, and aggressive behavior), mothers' mindfulness and their parenting styles. The mothers' parenting styles were classified into either an authoritative (i.e., characterized with high responsiveness and high demandingness) or a non-authoritative style. Data were analyzed using structural equation modeling. The results showed that mothers' mindfulness was negatively related to all types of children's problematic behaviors. The mothers' authoritative parenting style was also related to the children's behaviors except for the socially withdrawn behavior. Moreover, mothers' mindfulness and the authoritative parenting style showed positive correlation. Mindful parenting, which emphasizes mindful attitudes in parenting, has been reported to promote the sociable behaviors of children with ADHD, autism, and high aggressive behaviors. In that sense, it is suggested that the combination of mothers' mindfulness and their authoritative parenting style is similar to mindful parenting, which has the potential to reduce the problematic behaviors of children.

Keywords: Mother, Authoritative, Parenting Style, Mindfulness, Preschool Children, Problematic Behaviors



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**MEDICATION ADHERENCE AMONG DIABETICS: ARE THEY COMPLY?**

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**ABSTRACT**

Diabetes is a chronic medical condition and adherence to medication in diabetes is important. Improving medication adherence in adults with diabetes would help prevent the chronic complications associated with diabetes. Therefore, a pre and post intervention study was conducted to identify the effectiveness of a new health education material on medication adherence among adults with diabetes (low health literacy level). The study was performed at four health clinics between Jun 2015 until December 2015. The intervention group involved a standardized health education session with new health education material focusing on the importance of adherence to medication. Morisky Medication Adherence Scale (MMAS-8) was use as a data collection tool to measure adherence level. The change in MMAS-8 was measured after 6 months. A total of ninety six diabetic patients involved in the study. The results showed that the mean age was 52.3 years, 60.4% were female and 49.0% of patients have diabetes less than 4 years. At pre intervention, 93.8% were considered non-adherent, while 5.2% had medium adherence and only 1.0% with high adherence. The percentage of patients scoring low adherence MMAS-8 scores in the post intervention dropped from 93.8% at pre to 91.7 % at 6-months. There was no obvious change in the adherence scores at pre and post intervention. New health education material should apply innovative strategy and approaches to educate diabetic patients as to ensure the message conveyed effectively to the patient and translated with their compliance.

Keywords: Diabetic Patients, Medication Adherence, Low Health Literacy

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**FRAMING OF HEALTH MESSAGES: DIABETIC PATIENT'S PERSPECTIVES**

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*Institute for Health Behavioral Research, Ministry of Health, Malaysia***ABSTRACT**

Health messages can be formulated either in positive or negative form. This is because the positive and negative health messages frames have different effects towards individual health behaviour change. This study aims to identify whether positive message or negative message will be favoured by diabetic patients in controlling body weight and engaging in physical activities. In this qualitative study, 10 focus groups discussion (FGD) sessions with diabetic patients were conducted at the government healthcare facilities in 6 states in Malaysia from June 2011 to December 2011. The respondents were recruited by employing purposive sampling technique. Semi-structured questionnaire was used to obtain feedback from respondents during the FGD to identify whether positive or negatives messages can create different attention among diabetic patients about control body weight and physical activity. A total of 94 respondents involved in this study consisted of 52 males, 42 females aged between 50 and 60 years. The results have shown that majority of the respondents preferred a positive message framework based on their understanding, suitability and past experience. Most respondents felt that positive message motivates them for a better control of their health while the negative message contains elements of fear and threat does not convincing. In conclusion, positive message can increase health care motivation, awareness, knowledge and practice for a better quality of life. Understanding how patients feel about certain test and interventions can provide a better understanding as to the types of messages that will have the greatest impact.

Keywords: Framing, Health Messages, Positive Message, Negative Message, Control Body Weight, Physical Activity

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## PREVALENCE OF DIABETES MELLITUS TYPE II AMONG ETHNIC POPULATION IN THE URBAN COMMUNITY OF SIKKIM, INDIA

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### **ABSTRACT**

Background: Diabetes mellitus(DM) has been recognised as a public health problem and India is a major contributor of global diabetes prevalence . There is complexity of etiologies and need for early diagnosis and treatment and the call for finding the burden especially in remote areas with poor health care facility. Objective: To find the prevalence of diabetes mellitus type II and determine the factors associated with it amongst the native Sikkimese population of India. Materials and methods : A cross sectional descriptive study, with total enumeration of population aged 20 years and above having domicile of Sikkim(874),was conducted in the Urban field practice area of Gangtok from August 2013 –August 2014. Clinicosocial data was collected ,anthropometric measurement and blood pressure taken and FBG was measured after 8 hours of fasting using blood glucosemeter and then analysis was done using SPSS Software. Univariate and multivariate analysis was done. Result: On the basis of study, the prevalence of diabetes was found to be 16.36%. Out of total 143 diabetics, 118(82.5%) were previously diagnosed cases. Diabetes was significantly higher with increasing age. Employment, family history, sedentary lifestyle, BMI ,WHR and hypertension were significantly associated with diabetes. There was no significant difference in the prevalence of DM among gender and different communities. Conclusions: Comparing with the national figure the burden is quite high and thus there is an urgent need for intervention also in smaller states like Sikkim.

Keywords: Diabetes Mellitus, Sikkim

## HUMAN PAPILLOMA VIRUS VACCINE ACCEPTABILITY AND ITS ASSOCIATED FACTORS AMONG FEMALE STUDENTS AT A PRIVATE MEDICAL UNIVERSITY IN KUALA LUMPUR

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### ABSTRACT

There are various barriers and motivational factors which influence HPV vaccine acceptability among women. A cross-sectional study was conducted among year one and two undergraduate female students at a private university in Kuala Lumpur to determine the factors influencing HPV vaccination acceptability. A self-administered questionnaire was used to collect information about socio-demographic status, parental factors, knowledge score regarding HPV infection and HPV vaccination and perception about HPV infection and HPV vaccination from the respondents. The response rate was 89%. Of the 365 students who participated in the study, 103 (28.2%) had no intention of receiving the vaccination, the remaining 262 (71.3%) intended to take the vaccine. The results indicated a significant association between HPV vaccine acceptability and demographic characteristics such as age ( $p=0.04$ ), ethnicity ( $p=0.024$ ) and course of study ( $p=0.023$ ), family history of cervical cancer, knowledge on HPV vaccination and perception regarding HPV infection and HPV vaccination. However there was no association between HPV vaccine acceptability and marital status, year of study and parents level of education. Multiple logistic regression showed that the predictors for HPV vaccine acceptability were age group 21-24 years (OR= 3.192; CI 1.735-5.875); medical and nursing course (OR= 3.625; CI 2.006-6.552); poor knowledge level on HPV vaccination (OR= 5.016; CI 2.790-9.019); and poor perception level (OR= 4.010.; CI 2.287-7.013). This study showed that the predictors for intention to receive HPV vaccination among female students were age, course of study, knowledge on HPV vaccination and perception about HPV infection and HPV vaccination.

Keywords: Human Papilloma Virus Vaccination, Intention, Knowledge on HPV Vaccination, Perception on HPV Vaccination

# **GENDER PREFERENCE AND DESIRED FAMILY SIZE IN WOMEN USING LONG ACTING REVERSIBLE CONTRACEPTION IN UNDERSERVED POPULATION OF SINDH, PAKISTAN: A CROSS-SECTIONAL SURVEY.**

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## **ABSTRACT**

**Background:** Gender preference is a common phenomenon in many countries, strong preference for sons is often assumed to be a significant barrier to fertility reduction which is more pronounced in developing countries. Under the Family Planning and Reproductive Health, Sukh Initiative, ensuring sustainability in the use of modern contraceptive and increasing the demand through door to door services and advocacy of youth on sexual reproductive rights. The project aiming to change the behavior of youth and women (15-49) by developing a conducive environment and providing informed, voluntary reproductive health choice.

**Objective:** to assess the gender preference and desire family size in women using long term contraception.

**Methods:** Using cross sectional study design 5141 MWRA's were interviewed in peri urban region of Karachi during November to January 2015. All face to face structured interviews were conducted with women aged 14-15 currently living with their husbands. Question on contraceptive score was adopted from PDHS 2013, Pakistan. Descriptive and inferential analysis was performed on SPSS version 19.

**Results:** 70% of the participants were educated 42.2% of MWRA's were using any form of contraception of 30.4% using modern contraception. Knowledge on the modern contraception was 97%, mean of method's knowledge was 7.6 (SD 2.4), unmet need in the sample was 36.5% and the need was higher in age group 20-29-32%. An adjusted risk difference of -4.1 (95% CI -7.8 to -0.28; p-value = 0.035) was estimated between richest and poorest profile of using Long acting reversible contraceptives (LARC). Whereas increased level of education was found to be more effective for using LARC with an adjusted risk difference of 1.8 (95% CI -2.7 to 6.4; p-value = 0.431). 38% of women restricted their family size by 2 children and with increased level of education and irrespective of having same gender (both boys and/or both girls) use of LARC was 84%-86%.

**Conclusion:** Survey population proved a strong link of education and use of modern contraception and gender preference has on impact the on contraceptive use and fertility objective in the patriarchal setting. Study also illustrated an important clue for future family planning programmes that services at door-step and close follow up is important for the sustainability in long term contraceptive use.

## ENVIRONMENTAL HIGH RISK ASSESSMENT OF TOTAL SUSPENDED PARTICULAR EXPOSURE TO EMPLOYEE OF PT SEMEN PADANG

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### ABSTRACT

The cement industry has negatively impacts in air pollution that affect to the respiratory system. The aims of this study was to determine the level of environmental health risks through the risk analysis of Total Suspended Particular (TSP) exposure to employee of PT Semen Padang, West Sumatra, Indonesia. This study uses environmental health risk analysis (EHRA) method that aims to calculate the level of risk received by a population due to environmental exposure. Research was conducted on December 28, 2015 until June 27, 2016. The number of sample were 32 respondents. The sampling technique used was accidental sampling. TSP concentration measurements by using the tool Staplex Model TFIA series High Volume Air Samplers (HVAS). The results based on the value of the intake lifetime exposure to TSP inhaled indicate that the area Coal mill and Cement mill on the employees in the Production Department II / III PT Semen Padang at risk of developing respiratory problems to the value of  $RQ > 1$  and based on the value of the intake realtime exposure TSP inhaled were not at risk respiratory disorders with  $RQ < 1$ . Based on the research value of the intake lifetime exposure by inhalation TSP indicates that the area Coal mill and Cement mill employees in the Production Department II / III PT Semen Padang at risk of developing respiratory problems due to exposure to TSP. Suggested to the company to immediately carry out control measures to reduce the risk of respiratory disorders in employees.

Keywords: Total Suspended Particulate, Exposure, Environmental Health Risk Assessment

**PSYCHOMETRIC PROPERTIES OF KOREAN VERSION OF PULMONARY REHABILITATION ADAPTED INDEX OF SELF-EFFICACY (PRAISE) FOR PATIENTS WITH CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD)**

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**ABSTRACT**

Self-efficacy explores the emotional functioning and coping skills of an individual and is thought to be a strong predictor of health behaviors, which is particularly important for pulmonary rehabilitation (PR). To our knowledge, there is no measure of self-efficacy validated to explore behavior change in the context of PR for COPD patients in Korea. This study is to evaluate the psychometric properties of the Korean version of pulmonary rehabilitation adapted index of self-efficacy (PRAISE).

The original scale developed and validated by Vincent et al. (2011) was translated into Korean through a process of forward and back translation of the original scale. Exploratory factor analysis (EFA) through principal component analysis and oblique rotation was used to identify construct validity in a convenience sample of 150 COPD patients. Internal consistency was examined using Cronbach alpha coefficients. EFA confirmed two-dimensional structure scale from the original 15-item unidimensional-structure scale. The final scale composed of 12 items explaining 71.0% of the total variance and removed items were on perceived self-efficacy in overcoming the obstacles around certain behaviors, i.e. 'If someone opposes me, I can find the means and ways to get what I want. '. The two factors in the scale were named 'confidence in coping in daily life' and 'confidence in physical activity and exercise'. Cronbach's alpha coefficient was 0.93. The Korean version of PRAISE showed evidence of adequate construct validity and reliability. Results suggest the evidence to use PRAISE in real clinical settings as a predictor of behaviors for PR among COPD patients.

**Keywords:** COPD, Self-Efficacy, Pulmonary Rehabilitation, Validity, Reliability

## ETHNOGRAPHY OF YOUTH LEARNING

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### ABSTRACT

The purpose of this qualitative study aimed to study learning of youth through the community volunteering spirit process in a socio-cultural context. The study was conducted in one municipality located in Sra-kaew province from December 2015 to October 2016. This study employed critical ethnography method as the research design and it was divided into 3 phases :1 (exploring the community to understand socio-cultural context, 2 (studying the situation or event contributing youth volunteering spirit, and characteristic of youth volunteer in a community and 3 (analyzing the outcome or learning of youth from the development of volunteerism system in youths by community.

The participants were divided into 2 groups, including 42 key informants and 19 general informants. The data were collected using participant observation, in-depth interviews and focus group discussions, and analyzed by content analysis. The results indicated as follows. 1) The incidents and event causing youth volunteerism; Problems and needs in the community, National and local policies, Cultural practice, Cultural activities.2) Five characteristics of the volunteering work of the youth; Sociological, Economical, Environmental, Health-related and Political characteristics 3) Outcome from volunteer worked; Knowing how to work, Having morality and ethics, Having knowledge and skills in working as a volunteer, Being confident to express opinion, Being important and proud, Being a good ideal, be active, work as a volunteer, Having good attitude towards volunteer work.

Keywords: Youth, Volunteering Spirit, Youth's Learning



**FOOD SAFETY: KNOWLEDGE, ATTITUDE AND PRACTICE AMONG GURU  
PENDIDIK KESIHATAN IN PRIMARY SCHOOL, MALAYSIA**

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**ABSTRACT**

Report from Disease Control Division (Infectious Diseases) Ministry of Health Malaysia showed that 689 food poisoning episodes recorded in 2013 to 2016. This study aimed to identify levels of knowledge, attitudes, and practices related to food safety among *Guru Pendidik Kesihatan (GPK)* in primary school. A multi-centered cross-sectional study was conducted to obtain base line data on food safety involving 600 *GPK* selected randomly in 214 government primary schools in Malaysia. A multistage cluster sampling was applied in this study. Data was analysed using SPSS version 21; descriptive analysis (mean, percentages) and Chi-Square test was used to measure knowledge vs attitude vs practices. The study involved a group of *GPK* comprising of 71.3% women and 28.7% men, mean age score was 38.4. The education levels among *GPK* showed that 68.8% with degree, 17.0% with diploma and 4.8% with master degree. *GPK* have sufficient knowledge (75.7%), positive attitude (66.3%) and adequately practicing food safety (77.0%). There was a significant relationship between knowledge, attitude and practices levels ( $p < 0.001$ ). Regardless of results, 8.2% episodes of food poisoning have occurred in the last three years. Therefore, activities related to health promotion and education should be consistently maintained to prevent the increase of food poisoning cases among the school community.

Keywords: Knowledge, Attitude, Practice, Food Safety, *Guru Pendidik Kesihatan*, Primary School

**THE EFFECT OF AN EDUCATIONAL INTERVENTION BASED ON HEALTH BELIEF MODEL ON STANDARD PRECAUTIONS AMONG MEDICAL STUDENTS OF RAFSANJAN UNIVERSITY OF MEDICAL SCIENCES**

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**ABSTRACT**

Needle stick injuries are the most common kind of occupational exposure to blood and body fluids. Obeying the standard precautions decrease the risk of injuries. This study assessed the effect of educational intervention based on Health Belief Model on the behavior associated with standard precautions among medical students of Rafsanjan University of Medical Sciences. This was a case-control interventional study. Study population was consisted of 117 medical students of Fourth to seventh- year who were randomly assigned to two intervention groups case group (n=57) and control. Data were collected using a questionnaire made by researcher and were analyzed by statistical of Paired and independent t tests using SPSS (18<sup>th</sup> edition). The results showed that 80.8 Percent of students had no history of previous training on standard precautions. 15.5 Percent had experienced injuries with needles and sharp objects (Needle Stick), and 13.5 Percent of them had a history of contact with patients' secretions. The intervention in the case group, regarding the standard precautions, increased statistically significant the mean of structures of knowledge, perceived susceptibility, perceived severity, perceived benefits, self- efficacy and behavior. Despite the increase in the score of cues to action and reduction in the score of perceived barriers, changes were not significant. The result showed that educational intervention is effective in conducting healthy behavior and has been compatible with the Health Belief Model. Continuous education regarding precaution standards is recommended for medical students.

**Keywords:** Educational Intervention Standard Precautions, Medical Students, Healthcare, Needle Stick Injuries

## MEDICATION ERROR REPORTING IN PRIMARY CARE SETTINGS: A SYSTEMATIC REVIEW

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### ABSTRACT

Medication error (ME) reporting is an invaluable source of sharing and learning of safety lessons. However, previous evidences presented that ME was not reported due to multiple reasons. Earlier studies in ME reporting focused in acute care settings and little is known about this subject in primary care. A systematic review of published evidences of ME reporting in primary care settings using ten electronic databases was conducted. Inclusion criteria were studies which discussed one or combination of the following: knowledge on ME reporting, perceived barriers to, and facilitators for, reporting, attitudes toward reporting of self-errors or peers' errors, and ME reporting practice. Thirteen studies met the inclusion criteria. Five studies were conducted in community pharmacies and general practices respectively, two studies at primary care practices and one involved a community clinic. The knowledge on ME reporting was examined but it lacked in-depth exploration. Barriers and facilitators were categorised into six factors: error, individual, reporting system, organisation, work environment and external factors. Healthcare practitioners were less likely to report ME; either to an internal or external system. The severity of error outcome to a patient is an important determinant to reporting. ME reporting in primary care practices is significantly low. Studies related to medication errors reporting in the primary care settings were relatively few in number. Concerted efforts should target multiple aspects to promote ME reporting: a supportive organisation and a positive working environment, reinforced error reporting system, and educational programmes for healthcare practitioners.

Keywords; Medication Error, Primary Care, Systematic Review

## PERCEIVED EFFECTIVENESS OF PICTORIAL HEALTH WARNINGS ON TOBACCO PACKAGE IN KOREA: A CROSS-SECTIONAL STUDY

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### ABSTRACT

On 23<sup>rd</sup> December 2016, Korean government implemented pictorial health warning on tobacco package and increased the size of the warning from 30% (text-only) to 50% (picture and text) of the package, both front and rear. The purpose of this study was to evaluate the potential impact and perceived effectiveness of newly implemented tobacco pictorial health warnings compared to text-only warnings in Korea. A web-based survey was conducted among 1,611 adults and 816 youth from 21<sup>st</sup> February to 2<sup>nd</sup> March 2017. The result showed that 84.6% of adults and 74.9% of youth participated to the survey acknowledged the enforcement of tobacco pictorial health warning while 80.4% of adults and 76.6% of youth thought that tobacco pictorial warnings delivered health risk information effectively. Among adult smokers, 61.9% answered that pictorial warnings strengthen smoker's intention to quit smoking. Also, pictorial health warnings were rated as more effective than text-only warnings in informing health risk of smoking, reducing tobacco use, preventing non-smokers from start smoking, and in encouraging smoker's intention to quit smoking ( $p < 0.001$ ), in both adults and youth. Difference between male and female was observed, but there were no significant differences in age and socio-economic status. These findings suggested that the pictorial health warnings on tobacco package may help stop smoking and not to start smoking.

Keywords: Pictorial Health Warnings, Tobacco Package, Smoking

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**CORE ADULT TOBACCO SURVEY: BAGUIO CITY, PHILIPPINES 2012***J Andoy-Galvan**Taylor's University, School of Medicine, Malaysia***ABSTRACT**

The Core Adult Tobacco Survey (CATS) is developed from the Philippine Global Adult Tobacco Survey (GATS), which was a nationally representative household survey of all non-institutionalized men and women aged 15 years and older. Its main objective is to determine tobacco smoking prevalence at the city level. The city of Baguio has shown its determination to the anti-smoking campaign but there are no local baseline data to evaluate effectiveness of the implementation of city ordinances. There were 100 households included in the study and 162 individual respondents completed the interview. Overall, 27.2% of population aged 15 years old and above in Baguio City currently smoke tobacco; for men, 40% were daily smokers and 9.8% of women were daily smokers. Manufactured cigarettes are the type of product smoked by 100% of the smokers. Among manufactured cigarette smokers, 97.7% noticed health warnings on cigarette packages during the past 30 days, 59% reported that the warning labels on cigarette packages led them to think about quitting while 38.7% reported that it did not lead them to think about quitting. The prevalence of smoking in the city is almost similar with the prevalence of smoking in the country. The women are more likely to smoke as compared with other women of the country. There were more daily smokers and higher percentage secondhand smoke daily exposure at home in CATS as compared to GATS. This baseline prevalence provides useful information to the policy makers for reviewing policies and program formulation.

Keywords: GATS, CATS, Smokers, Secondhand Smoking, Baguio City

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## HEALTH CARE NEEDS AND HEALTH SERVICE NEEDS FOR ADOLESCENTS LIVING WITH HIV

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### **ABSTRACT**

Adolescent period is the age of physical, emotional and social change. In participated adolescents with HIV, their lives are dealing with uncertainty and require specific health care management. This study was to examine health care needs, and health care service needs among 26 adolescents with HIV aged 10 – 20- years – old. Fifteen caregivers, nine health care providers and two representatives from private foundation agent were assessed for health care needs, and health care service needs for adolescent with HIV. Quantitative and qualitative approaches were used to collect data in adolescents living with HIV at a provincial hospital, Northeast of Thailand between March 2016 and March 2017. The quantitative data analysis entailed descriptive statistics with percentage, mean, and standard deviation while the qualitative data involved content analysis from individual cases, in-depth interviews, and focus group discussions. Findings demonstrated that adolescents with HIV has several needs such as (1) mental health care i.e. personal goal setting (2) sexual health care and prevention of transmission (3) life skill development and (4) non – disclosure health service. Nurses should help adolescents with HIV to meet essential needs in order to be satisfied on living with HIV.

Keywords: Adolescents, HIV, Health Care Needs, Health Service Needs

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### ***Helicobacter pylori* INFECTION ESTIMATION IN GENERAL POPULATION OF LAHORE**

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#### **ABSTRACT**

*Helicobacter pylori* (*H. Pylori*) is the microorganism causes persistent bacterial infection worldwide. It is related to peptic ulcers, gastric ulcers; mucosa associated lymphoid tissue lymphoma and gastric cancers. *H. pylori* has higher prevalence in developing countries of world. This study was conducted to determine the prevalence of *H. pylori* infection in general population of Lahore, Pakistan. A cross sectional study was conducted at AL-Razi Health Care Centre, Lahore from January 2015 to January 2017. The serum samples of individuals were estimated for anti *H. pylori* IgG antibodies by enzyme linked immunosorbent assay (ELISA). Total 1502 individuals with age range from 5 to 86 years were included in this study. Out of these 734 (49%) were males and 768 (51%) were females. The results showed that 853 (57%) out of 1502 subjects were seropositive for *H. pylori*. The prevalence of *H. pylori* infection was highest (63%) in middle age (41-60 years) group while lowest (33%) in teens and pre teens (<20 years) group. In young age (20-40) and old age (>60 years) groups, the prevalence of *H. Pylori* was 55% and 60% respectively. So, It can be concluded that the frequency of *H. pylori* infection increases with age.

## MICROBIOLOGICAL EXAMINATION OF READY-TO-EAT SALADS IN LAHORE, PAKISTAN

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### ABSTRACT

Food-borne diseases are the most common public health problem all over the world. These are responsible for human illness, death and economic loss at large scale. Ready-to-eat salads available in market are considered as a high-risk food because they do not necessitate any heating, washing or cleaning before consumption. Taking this into consideration this study was designed to determine the microbiological status of ready-to-eat salads in Lahore. A total of 50 different salad samples were collected aseptically from different restaurants and vendors. Each sample (10 g) was homogenized in stomacher. The homogenized material was serially diluted up to  $10^{-6}$  using 0.1% peptone water as diluent. The dilutions were inoculated on blood, nutrient and MacConkey agar by Surface-Spread Plate technique and plates were incubated at 35°C for overnight. Number of colonies were counted on nutrient agar plates to determine Aerobic colony count (ACC). Identification of the organisms was determined by their morphology, culture characteristics and biochemical profile. The ACC of salad samples ranged from  $1.0 \times 10^3$  cfu/g to  $5.8 \times 10^8$  cfu/g. As per Public Health Laboratory Services (PHLS) guidelines, 22% of the samples showed unsatisfactory levels of ACC and 20% were at borderline. The highest ACC (cfu/g) was found in dry vegetables salads ( $5.8 \times 10^8$ ) and lowest microbial loads ( $1.0 \times 10^3$ ) were observed in vinegar- containing vegetable salads. Among Gram-negative rods *Klebsiella* spp. (16%) were isolated most frequently followed by *Enterobacter* spp. (11%). Whereas among Gram-positive cocci, *Enterococcus* spp. (13%) was foremost followed by *Staphylococcus aureus* (7.5%). This study revealed the potential hazard of ready-to-eat salads and it is crucially needed to perform a surveillance study at national scale.



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## **TAKE HEED! ANTINUCLEAR ANTIBODIES (IGG) EXISTENCE IN GENERAL POPULATION**

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### **ABSTRACT**

The autoimmune disorders and auto antibodies are rapidly becoming a major cause of concern in the medical field. Antinuclear antibody plays a significant role in autoimmunity and it is targeted against different nuclear antigens. Although its elevated levels are found in autoimmune disorders but it is also synthesized in healthy individuals. To find out its incidence a number of studies have been conducted on healthy individuals of various populations but limited data is available about the frequency of auto antibodies in Pakistan. Blood samples of 587 (503 females and 84 males) individuals were taken through convenience sampling technique. Serum was separated by centrifugation and then ANA titer was determined by Enzyme Linked Immunosorbent Assay (ELISA). SPSS version 20.0 (IBM-SPSS, Inc, Armonk, New York) was used for statistical calculations. ANA autoantibodies were found only in 6 individuals, out of which 5 were females and 1 was male. No significant association of antinuclear antibodies was observed between males and females. Evaluation of the incidence of ANA in general population is important to ensure its reliability as a biomarker of disease. Current study found very low occurrence of ANA in general population which indicates its exclusive association with the diseases especially autoimmune diseases. The one percent positive cases can be further followed up for being at risk of developing disease.

## COMPREHENSIVE EVALUATION OF VITAMIN D STATUS IN GENERAL POPULATION OF LAHORE

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### ABSTRACT

Vitamin D deficiency (VDD) has arisen as a global issue and having manifold damaging effects on human health it needs urgent attention. Vitamin D is characteristically involved in bone and mineral regulation, but its deficiency can cause many extra-skeletal problems as well such as infections, heart diseases and even cancer. Due to its high incidence all over the world VDD is now documented as a pandemic. Situation is even more worrying in Pakistan. Therefore, the present study was aimed to determine the status of vitamin D levels in general population of Lahore with sufficiently large sample size. Blood samples of 5000 healthy individuals were taken after taking their consent. After extracting serum, 25(OH)D assay was performed by Electrochemiluminescence Immuno Assay (ECLIA). Results revealed that 42% of the subjects has deficient levels of vitamin D and 29% of the participants showed insufficient levels. In current study 49% of male participants and 37 % females showed deficient levels of vitamin D. No significant association was found between vitamin D deficiency and gender or age group. Vitamin D deficiency is prevalent in Pakistan in all age groups. There is a need to take immediate measures to tackle this growing public health problem. As we are blessed to have good sunny days all round the year, by adopting simple measures and life style changes we can win the battle against vitamin D and get rid of the risks associated with vitamin D deficiency.

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## MODELLING PAKISTAN HEALTH SYSTEM PERFORMANCE DOMAINS AND EFFECTIVE IMPLEMENTATION OF 18<sup>th</sup> AMENDMENT

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### ABSTRACT

**Introduction:** Health care system of Pakistan is challenged due to increased disease burden and poor utilization of resources. The Millennium Development Goals has remained unaccomplished and the health system has failed to improve health outcomes. As a solution, devolution of powers from federal authority was attempted, and the latest 18th constitutional Amendment has failed in improving health care delivery. The aim is to propose a solution based on a model which align the authority against functional domains of Health system performance (HSP). **Methods:** The analysis from Pakistan HSP assessment framework based on WHO provided the key domains which were used in building the conceptual model as a proposed solution. Economic model was utilized as a predictor of the basic body plan and a spectrum of conflict resolution responses to integrate with the identified health performance domains (federal, provincial and local) **Result:** The identified action domains were aligned based on the health economic model. The identified domains in federal were national health policy, global linkage & commitment, standards of care, health trade, disaster response, health information system, drug authority & regulation. Disease burden assessment and care in local body. While local health information systems, service deliveries, human resource imperatives, health enforcements, Governance including accountability, transparency and Health finance imperatives were derived for provincial states. The comparative difference using potbelly vs hourglass economic model shows the key difference and probable solution for effective implementation of healthcare services. **Conclusion:** The proposed model demonstrates a possible solutions towards effective implementation of 18th constitutional amendment.

**Keywords:** Health, 18<sup>th</sup> Amendment, Pakistan, Health Outcomes, Health Policy

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**EFFECTIVENESS OF A MULTI-LEVEL AND CONTEXT-SPECIFIC  
INTERVENTION DESIGNED TO IMPROVE TB TREATMENT ADHERENCE AND  
RETENTION INTO CARE AMONG MIGRANT MINeworkERS WITH TB IN  
SOUTH AFRICAN GOLD MINES: A RANDOMISED CONTROLLED TRIAL**

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**ABSTRACT**

The incidence of TB in South African mines is estimated at 2500-3000/100 000 people, which is more than 3 times higher than the general South African population, and ten times the WHO's emergency threshold. TB treatment non-adherence, retention into care and week cross-border referral mechanisms remain major concerns in this population. As part of a SADC's regional drive to address the burden of TB in mines in Southern African, we developed, implemented and assessed for effectiveness an evidence-informed and multi-level intervention aimed at improving TB treatment adherence, retention into care, as well as TB-related stigma and knowledge, in a sample of both local and migrant mineworkers with TB in two large mines in South Africa. The intervention design was preceded with a comprehensive scoping/elicitation study to inform the intervention which was evaluated using a two-arm, parallel group, and single-blind randomized controlled trial design. The study involved a sample of 153 (n=66 and n=87 for control and intervention groups respectively) which carried an 80.4% study power. The average treatment effect results showed that intervention participants significantly attained better overall adherence, weekend adherence and week-day adherence compared to control participants. Furthermore, survival analysis revealed that the "risk" of defaulting TB treatment was significantly delayed for intervention participants vs. control. The mixed-effect repeated-measure ANOVA also showed that participants in the intervention arm trended toward higher gains in TB knowledge and less stigma. The retention rate was better in the intervention group vs. control but not statistically significant. The results show great promise that adherence could be improved with this type of intervention being offered as standard-of-care to support mineworkers in TB treatment adherence whilst on leave and away from the mines.

Keywords: Mineworkers, Occupational Exposure, TB, Southern Africa, Intervention, Adherence

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## **HEALTH SERVICE RELATED FACTORS AND THE UTILIZATION OF FIRST WEEK POSTNATAL CARE BY MOTHERS ATTENDING UNDER-FIVE CLINICS IN IRINGA, TANZANIA**

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### **ABSTRACT**

The first seven days following child birth are very risky for both the mother and the child and most maternal and infant deaths occur during this period. Therefore, it is vital that after delivery the mother receives two consecutive postnatal care services in the first week. However, in Africa only 13% of the women receive postnatal care within the first two days. In Tanzania, of the 94% of the women who attended antenatal care in 2009, only 47% attended postnatal care as a whole and no information regarding the utilization of first week postnatal care was recorded at the time of the study. This study sought to expand further on the health service related factors influencing the utilization of first week postnatal care services in Iringa, Tanzania. A cross-sectional design of both quantitative and qualitative was adopted in this study where 264 mothers were randomly selected from the 5 major under-five clinics. The clinic were purposively selected from 31 health centers in Iringa Municipality, Tanzania. 261 mothers answered researcher-administered questionnaires, 10 Key Informant Interviews [KIIs] were also conducted on the health workers from the five major health units. Checklists were as well used to check for the quality and quantity of the PNC services provided in the above under-five clinics. Only 25.3% attended first week PNC. Mothers who were examined together with their children before being discharged were more likely to utilize first week PNC compared to those who were not (COR=6.869, P-value=0.000 and AOR=3.503, P-value=0.002). Mothers with appointments for PNC were more likely to utilize first week PNC compared to those without appointments (COR=9.178, P-value=0.000 and AOR=2.96, P-value=0.029). Mothers who were aware of first week PNC were more likely to utilize first week PNC compared to those who reported not being aware (COR=4.89, P-value=0.000 and AOR=5.015, P-value=0.001). The quality of healthcare provided at health facilities in terms of services and information increase utilization of first week PNC.

**Keywords:** Health Service Related Factors, Mothers, Utilization, First Week Pncs, Under-Five Clinics

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**IMPLEMENTATION OF HYGIENIC PROCEDURES AMONG PRE-SCHOOLERS:  
PRE & POST INTERVENTION STUDY**

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**ABSTRACT**

Oral health and hand washing activities have been carried out for pre-school children since 1984. These activities have focused on oral and hand hygiene promotion and prevention with the objectives of creating health awareness at an early age. Hand washing with soap alone averts 0.5–1.4 million deaths per year but hand washing levels seems to be low among school-aged children. Hygiene among pre-school student is generally a problem now days. The percentage of children infected with infectious disease is increasing as the children are exposed to unhygienic condition as the lack of knowledge of the proper ways to maintain their hygiene especially their hand and mouth. Therefore, this intervention program is to analyze the knowledge of pre-school student on hand and oral hygiene and to educate them. The general objective of the study is to instill oral health awareness so as to maintain good oral health and hand hygiene among children of pre-school age. The methodology of this study required an intervention and teaching session regarding the oral health and hand washing hygiene among the student. The performance of student before and after the intervention is recorded. The result showed that there is significant improvement of the student after the intervention was carry out. The knowledge and the techniques of the oral health and hand washing increased steadily in both Year 5 and Year 6 as well as the overall assessment because the student can demonstrate the correct way to practice oral health and hand hygiene after the intervention. Based on this study, we hope that in the future there is a better way to increase the awareness oral health and correct hand washing practice among the pre-school student.

# **VIRTUAL PRESENTATIONS**





## ASSOCIATION BETWEEN METABOLIC SYNDROME AND LIVER FUNCTION AMONG SEMICONDUCTOR INDUSTRY WORKERS IN SOUTH TAIWAN

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### ABSTRACT

High-tech industry is crucial to Taiwan's economic development although workers experience changes in lifestyle posing elevated risk with respect to chronic diseases. Aim of the study is to evaluate the associations between aspartate aminotransferase (AST) and alanine aminotransferase (ALT) with metabolic syndrome (MS) among semiconductor industry workers in south Taiwan. The retrospective analysis of individuals attending annual health examinations on 1464 workers from semiconductor plants in Taiwan. Liver function abnormality was defined as AST>55 IU/L, ALT >40 IU/L. Our criteria included waist circumference Male  $\geq 90$ cm and Female  $\geq 80$  cm based on Taiwanese criteria (Ministry of Health and Welfare 2007), systolic blood pressure (SBP)  $\geq 130$ mmHg or diastolic blood pressure (DBP)  $\geq 85$ mmHg; triglycerides (TG)  $\geq 150$  mg/dL; high-density lipoprotein cholesterol (HDL-C) Male <40 mg/dL and Female <50 mg/dL; and fasting glucose (FG)  $\geq 100$  mg/dL. A clinical diagnosis of metabolic syndrome was defined as the presence of three of the above risk factors. The means of AST and ALT levels in the MS workers ( $31.70 \pm 15.59$ ;  $50.75 \pm 28.01$  IU/L) were higher than levels in the Non-MS workers ( $25.40 \pm 9.04$ ;  $35.18 \pm 17.26$  IU/L). In our study, the unadjusted age and gender analysis showed that ALT and AST values were significantly associated with MS ( $P < 0.001$ ,  $P < 0.001$ ). After age and gender adjusted that was not significance. In this study, we investigated that ALT and AST values were not significantly associated with MS after age and gender adjusted among the semiconductor industry workers.

**Keywords:** Semiconductor Industry, Metabolic Syndrome, Liver Function, Aspartate Aminotransferase (AST), Alanine Aminotransferase (ALT)

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**ASSESSMENT OF IMPLEMENTATION OF THE PHILIPPINES' EXPANDED  
BREASTFEEDING PROMOTION ACT OF 2009 (REPUBLIC ACT NO. 10028)**

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**ABSTRACT**

Malnutrition among 0 to 5 year old Filipino children is persisting. Translation of Republic Act No. 10028 or the Philippines' Expanded Breastfeeding Promotion Act of 2009 is vital towards enhancing efforts in addressing the first 1,000 days critical period in infancy and early childhood. The study reviewed and analyzed the status of the law in terms of its implementation, determined enhancing and hindering factors for its implementation using focus group discussions and key informant interviews among various entities known to play a key role in the implementation of R.A. No. 10028 based on the implementing rules and regulation (IRR). Based on the evaluation criteria developed, there were aspects in the IRR that remain "unclear" or were "present, but with questions". Knowledge and understanding of the law among program implementers varied. Awareness, information dissemination, advocacy and promotion as well as partnerships and commitments facilitate implementation of the law. On the other hand, the absence of a monitoring and evaluation system, unavailability of resources in the form of financial, materials, manpower, carrying capacity of focal persons and agencies and commitments of local government units hinder its implementation. A Joint Memorandum Circular enjoining partner-implementers to their full participation according to identified roles and tasks in the IRR are keys to the law's operationalization. Research participants voiced the need for the review of the policy, a "re-assembly" of the national working group on infant and young child feeding (IYCF) program and the creation of an oversight committee on the implementation of the law.

**Keywords:** Filipino Children, Breastfeeding Promotion, Philippines

## COMPARATIVE OUTCOMES OF PTCA IN DIABETIC VERSUS NON DIABETIC PATIENTS: OBSERVATION

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### ABSTRACT

In India, government of Maharashtra state launched an insurance scheme for Below Poverty Line (BPL) families to improve access to specialty health care including cardiology. The procedures done under this welfare scheme were uploaded in an electronic database of the health department. We accessed the registry database of percutaneous transluminal coronary angioplasty (PTCA) patients with coronary artery disease (CAD) to compare outcomes in patients of diabetes versus non-diabetes. **Methods:** We studied total 2527 CAD patients, which underwent PTCA. The patients discharge summaries were accessed from the electronic database to get details of the PTCA procedure following which telephonic calls to assess the PTCA outcomes. Informed consent of the patient was taken. The outcomes of PTCA in 809 diabetic patients and 1718 non-diabetic patients with CAD treated from January 2012 to December 2015 and followed up for a 6 months to 1 year by a telephonic interview with patients itself or relatives of patients. The outcomes of interest included death and repeat revascularization. **Result:** Mortality and restenosis were significantly lower in the non-diabetic patients than in diabetic patients, mortality-116 i.e.6.1% vs. 56 i.e.6.9%. Same as in restenosis -1.6% vs 1.7% with significant P value i.e.  $p < 0.001$  which is calculated by Pearson's Chi Square test. Patients with diabetes mellitus have a less favorable clinical outcome at one year after successful stent placement as compared to the non-diabetic patients. The clinical follow-up was characterized by a higher incidence of death and re-interventions in diabetic patients which also demonstrated an increased risk for restenosis.

## ANTENATAL DEPRESSION; ITS PREVALENCE OF POSITIVE SCREEN AND THE ASSOCIATING RISK FACTORS INCLUDING LABOUR AND NEONATAL OUTCOME

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### ABSTRACT

Antenatal depression is often neglected and unrecognized. It is known to be associated with various unwanted outcomes to both mothers and newborns. This study aims to assess the prevalence of a positive screen for antenatal depression and its risk factors and the pregnancy outcomes. Pregnant women who received care from University Malaya Medical Centre have completed the Edinburgh Postnatal Depression Scale (EPDS) questionnaire twice; during antenatal and postnatal period. The association between risk factors, labour and neonatal outcome with positive screen group on EPDS score were analyzed. Result showed that 41 women (17%) were found to have a positive screen and it has a significant positive correlation with postpartum EDPS score ( $r=0.919$ ,  $p=0.00$ ). After adjustment for confounders, pre-existing medical illness is the only risk factor found to be associated with positive screen group (OR 3.0, 95% CI1.11-8.46). The positive screen group also associated with reduced neonatal birthweight (OR=0.998; 95%CI0.997-0.999), reduced cord pH (OR=0.000; 95%CI0.000-0.202) and increased blood loss at birth (OR=1.005; 95%CI1.001-1.009). In conclusion, positive screen group of antenatal depression associated with few adverse pregnancy outcomes. Therefore, a formal mental health assessment should be offered to this group.

Keywords: Antenatal Depression, Postnatal Depression, EPDS, Pregnancy Outcome, Neonatal Outcome

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## IMPACT OF AGEING ON CORONARY ATHEROSCLEROTIC PLAQUE BURDEN AND COMPOSITION ANALYZED BY INTRAVASCULAR ULTRASOUND

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### ABSTRACT

Aim of the study was to evaluate age related differences in the volumetric composition of coronary vessel atherosclerotic plaque intravascular ultrasound (IVUS).

**Methods:** In patients undergoing angiography, IVUS was performed using an Eagle Eye® Gold Catheter (20MHz) and an automatic continuous pullback device (VolcanoCorp.) velocity of 1mm/s and ECG-gated/R-wave triggered frames were acquired. IVUS analysis was performed in 85 vessels of 35 patients by specially trained investigator, blinded to clinical and angiographic data. Contours of lumen and media-adventitia interface were detected semi-automatically. For every cross-sectional area, vessel and lumen diameters as well as the area for the different plaque components were calculated using special software package (pcVH2.2, Volcano and QIvus3.0.2.22, Medis). Spectral analysis of IVUS radiofrequency signals provided histology of plaque identifying 4 major plaque components, fibrous (FI), fibro-fatty (FF), necrotic core (NC) and dense calcium (DC). Quantitative assessment of these plaque components in the coronary arteries were compared between age groups. Patients were grouped as, Group I (45yrs & below), Group II (between 45-60yrs) and Group III (60yrs & above) for this analysis.

**Results/Discussion:** Significantly larger mean plaque burden in Group III (54.99%) than Group II (41.12%) and Group I (44.53%). Degree of atherosclerosis like plaque volume (830.54mm<sup>3</sup>, 672.85mm<sup>3</sup>, and 1183.31mm<sup>3</sup>) and plaque burden (13.18mm<sup>2</sup>, 11.42mm<sup>2</sup> and 13.36mm<sup>2</sup>) was higher in Group III. Older patients had a significantly higher NC volume (129.72mm<sup>3</sup>; p=0.056) and DC volume (36.69mm<sup>3</sup>; p=0.058) as compared to Group I (69.63mm<sup>3</sup>, 14.71mm<sup>3</sup>) and Group II (38.54mm<sup>3</sup>, 9.56mm<sup>3</sup>).

**Conclusion:** Analysis showed elderly patients compared to younger patients, had larger plaque burden, larger amount of necrotic core and dense calcium in coronary arteries. This implies more severe degree of atherosclerosis and presence of vulnerable plaques in elderly patients than younger ones.

**Keywords:** Ageing; Coronary Artery Disease; Plaque Composition; Intravascular Ultrasound (IVUS)

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## IMPACT OF MEDICAL EDUCATION IN PROMOTING HEALTHY LIFE OF MEDICAL STUDENTS

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### **ABSTRACT**

Education represents an important aspect of health and has a great effect on health behavior among university students and It is expected that medical education has more effect, This paper represents a comparison between senior students in faculty of medicine and senior students in non-medical faculty "faculty of commerce" to find out whether the medical education has contributed in improving the quality of life of medical students or made no difference. The study was held on 600 students "300 of each faculty" and the results were unexpected. For example, the percentage of medical students who never have breakfast in weekdays is more than those in commerce ,and also in sport club , the percentage of medical students who never join sport club (85.3%) is more than those in commerce (79%). But in eating junk food, both medical students and commerce students eat junk food at least more than one day a week with no significant difference between them, and also in doing exercises, the majority of both medical and commerce students don't exercise regularly. The study discusses these differences and a lot of other aspects of their life and behavior and recommends which topics education especially" medical education" should cover and focus.

Keywords: Medical Education, Health Behavior, Senior Students

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## **AWARENESS ABOUT PLASTIC SAFETY IN DOCTORS OF RAWALPINDI AND ISLAMABAD**

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### **ABSTRACT**

Plastic available in market is of different types based on the resin added to it and mostly contains chemicals with EA (estrogenic activity). Most plastic items release these chemicals in the liquid contained in them especially in case of physical stress (e.g. of heat or UV light). Unsafe plastics are indicated by numbers 3, 6 and 7 (written on top or bottom of containers); named as Polyvinyl chloride or PVC (no. 3 plastic), Polystyrene or PS (no. 6) and Polycarbonate (no. 7) which contains Bisphenol A (BPA). Other plastics that are safer are Polyethylene Terephthalate or PET (no.1), HDPE (no. 2), LDPE (no. 4), and Polypropylene (no.5). Research on harmful effects of plastic is increasingly being done nowadays. The objective of this study was to assess the awareness of doctors about safe use of plastic utensils. It is a cross sectional study conducted in selected medical colleges of Rawalpindi and Islamabad in a period of six months in year 2015. Data was collected by 228 doctors from selected medical colleges and hospitals of Rawalpindi, Islamabad, using consecutive sampling. Respondents were asked if they knew about the different qualities of plastic, the number allocation of plastics, which plastic numbers to avoid as utensils. Also, they were questioned about their awareness about leaching of chemicals from plastic utensils, factors increasing this leaching and diseases associated with use of plastic. Age range of doctors was 25 to 65 years. 82.5% doctors were from clinical sciences and rest from basic sciences. About types of plastics available, 3.1% doctors gave correct answer. About unsafe plastic numbers, 1.3% was aware. According to the scale used for measuring 'awareness about plastic safety', only 27.2% doctors were found to be aware. Least awareness was found for the question asked about which plastic numbers to avoid. Awareness on mass level is required by public health authorities to prevent the unsafe use of plastic utensils.

**Keywords:** Awareness, Plastic Safety, Leaching of Chemicals

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## AMBULATORY CARE SENSITIVE CONDITIONS RATES IN MEXICO DURING 2010-2014

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### **ABSTRACT**

**Objective:** To estimate the rates of hospitalization for Ambulatory Care Sensitive Conditions (ACSC) in the main health services institutions in Mexico during 2010-2014. **Methods:** The frequency and rates of ACSC were estimated by the use of hospital discharge records from 2010 to 2014 and compiled by the entity Dirección General de Información en Salud. As for the ACSC baselines, there were used the ones proposed by Gusmano et al. (70 ICD-10 codes) and by Purdy et al. (250 codes). The rates were adjusted for age by using the direct method. **Results:** During the analysis phase, there were 23,184,208 registered hospital discharges. By using the ACSC baseline proposed by Gusmano et al., it was estimated an average of 4.4% from the total of hospital discharges. The rates were from 180.2 to 191.2 per 100,000 population. Perforated appendix, arterial hypertension, and cellulitis were the diagnostics with the highest ACSC rates in the country. On the other hand, when using Purdy's baselines, it was estimated an average of 11.2% ACSC. The rates moved from 445.9 to 476.7 per 100,000 when including the 250 ICD codes. Diabetes, pneumonia, and pyelonephritis showed the highest rates. It was noted that, regardless the baseline being used, the ACSC rates got the lowest rates in comparison with previous years. **Conclusions:** In summary, this initial approach about ACSC, provides information about the causes which might be sensitive to interventions towards a better quality in health care services.

**Keywords:** Ambulatory Care, Hospitalization, Healthcare Systems, Mexico



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## ANALYSIS OF THE DIFFERENTIAL EXPRESSION OF MICRO-RNA LET-7a AND ITS RELATIONSHIP TO THE MOLECULAR SUB-CLASSIFICATION & HORMONES RECEPTOR STATUS (AR & ER- $\beta$ ) IN A COHORT OF BREAST CANCER

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### ABSTRACT

Breast cancer is molecular and clinically heterogeneous disease and is the most common cause of cancer related death among women worldwide. The altering expression of MiRNAs profile have been identified as modulators of proliferation, apoptosis and resistance treatment in breast cancer. Let-7a is a known tumor suppressor. These are expressed in healthy cells, however, their expression is reduced in breast cancers. The aim of this study was to investigate the differential expression of let-7a in breast cancer with molecular subclassifications and its correlation with estrogen receptor subtype ER  $\beta$  and Androgen Receptors. A total of 39 FFPE sample of breast cancer collected from the UHS out of them 5 samples of fibroadenoma were taken as a control. Out of 39 specimens analyzed for molecular subtyping for breast cancer heterogeneity, luminal A were 29 % of the cohort whereas, 33 % are triple negative with 23 % have the her2/neu enriched aggressive type clinically. Luminal B make up only 5% of the burden. Analysis of let-7a shows predominant down regulation in all molecular subtyping with significant decline in triple negative breast cancer. Let-7a upregulation in androgen and estrogen receptor  $\beta$  positive cases shows inverse relation as compared to Luminal A, B and her2/neu enriched invasive ductal carcinoma cases which has appositive prognostic impact. Therefore, we concluded that Let-7a can be used as a prognostic marker for breast cancer evaluation and future studies with increase sample size on other types of breast cancer may be included to reach a final conclusion to devise a signature panel for miRNA analysis.

**Keywords:** Let-7a, Micro-RNA, AR, Molecular Subtyping, ER- $\beta$

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## KNOWLEDGE AND SKILLS OF YOUNG ADOLESCENTS TO REFUSE SUBSTANCES

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### ABSTRACT

The behavior of drug use disorder is a threat to our young generation. Various efforts have been made to prevent teenager to use substance, but young adolescents' knowledge and skills to refuse substances have never been evaluated. The purpose of this study was to describe the young adolescent' knowledge and skills to refuse substances and their relationship to the characteristics. This is a descriptive study, conducted in 300 young adolescents, the 7<sup>th</sup>-grade students of secondary school, aged 12-15 years old in two cities from Yogyakarta province. The variables studied were young adolescent' knowledge about, skills to refuse substances, and their characteristics. The data were collected using a questionnaire (self-reported questionnaire), analyzed using Pearson correlation test and Spearman rho, with 95% level of significance. The results showed that the average score of young adolescents' knowledge about substances was 66.39 and the score of skills to refuse substances was 55.62 with both maximum score of 100. There was a significant relationship between the two variables (p value 0.001). There is no significant relationship between the young adolescent' characteristics (age and sex) with their knowledge and skills to refuse the offer. Young adolescents' knowledge about substances and skills to refuse the substances offer still needed to be improved. Skills to refuse substances tend to increase in accordance with age, but there is no significant relationship between knowledge and skills to refuse substances offer in different gender and age.

Keywords: Knowledge and Skills, Young Adolescents, Refuse Substances

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**UNDERSTANDING BETTER THE BELIEFS AND ATTITUDES TOWARD BREAST  
CANCER AND BREAST SCREENING PRACTICES AMONG WOMEN LIVING IN  
RAS AL-KHAIMAH, UNITED ARAB EMIRATES (UAE)**

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**ABSTRACT**

Breast cancer is the most frequently diagnosed malignant disease among women in the United Arab Emirates (UAE), and the incidence rate is rising. Breast cancer early detection practices through regular screening have been found to reduce morbidity and mortality from this disease. However, low participation rates in breast cancer screening practices have been previously reported among UAE women due to cultural, personal, and social beliefs. This study, therefore, aims to explore knowledge, beliefs, attitudes and practices towards breast cancer and its screening methods among women living in the Emirate of Ras Al-Khaimah. One hundred and two women who met the study's inclusion criteria were invited to participate. Chi-square test and exact logistic regression analysis were performed in the statistical analysis. Relatively low participation rates in breast cancer screening practices were found. Breast Self-Examination (BSE) was practiced by 50%, Clinical Breast Examination (CBE) by 55 % and mammography by 38% of the study population. Women who stated their doctors talked to them about breast cancer were significantly more likely to undergo breast cancer screening practices. Fear of being diagnosed with breast cancer was the most common reason given by nearly half of the participants for not planning to practice CBE or undergo mammography screening in the 12 months post-interview. The study findings indicate that Ras Al-Khaimah women's knowledge and practice of breast cancer early detection activities are inadequate. Establishing a culturally acceptable health education program with appropriate interventions is required.

**Keywords:** Breast Cancer Screening Practices; Arab, Breast Self-Examination; Clinical Breast Examination; Mammography

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## INTRODUCING AN INNOVATIVE EPI IN-SERVICE TRAINING APPROACH: LESSONS FROM A TRAINING NEEDS ASSESSMENT IN NIGERIA

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### **ABSTRACT**

Health workers providing routine immunization (RI) services play a crucial role in influencing vaccine uptake which is a key determinant of immunization coverage. Over the years, Training Needs Assessment (TNA) has not been used to determine the training needs of health workers and what training approach should be adopted.

We conducted TNA in three states to assess the current level of EPI knowledge among RI service providers and tutors in pre service institutions in order to identify unfulfilled training needs and proffer feasible solutions. It also sought health workers (HWs) perception on an innovative training approach that was about to be piloted, where tutors will be used for in-service training.

TNA tools in survey format were designed to obtain knowledge based information from respondents on fundamental EPI concepts. Focus group discussions were also conducted to get HWs viewpoint on previous trainings and the proposed new training approach.

HWs knowledge on Reaching Every Ward (REW) strategy domains and some basic immunization concepts were varied and suboptimal. Over half (83%) of the HWs could not differentiate between the live attenuated and killed forms of vaccine. Tutors knowledge of fundamental EPI concepts also varied across the states. Perception of the new training approach differed among the HWs assessed.

HWs and tutors had varied knowledge of key EPI thematic areas. HWs knowledge of access and utilization strategies needed to increase vaccine uptake was suboptimal. Other external factors such as delayed remunerations, insecurity and lack of funds to carry out outreach activities also influenced HWs performance.

**Keywords:** TNA, Health Workers, EPI, Immunization Concepts, Tutors, Nigeria



