



## **Conference Proceedings**

**2019 – 25th International Conference on Research in Life-Sciences & Healthcare (ICRLSH), 12-13 December, Sydney**

**12-13 December 2019**

## **CONFERENCE VENUE**

**Holiday Inn Potts Point, Sydney, Australia**

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## **Preface:**

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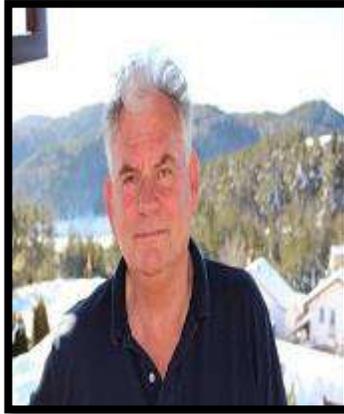
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## **KEYNOTE SPEAKER**



### **Prof. Dr. Mome Spasovski**

**PhD, Director, Institute for Social Medicine, Faculty of Medicine, University Ss. Cyril and Methodius, Skopje, Republic of North Macedonia**

**Topic: Public Health and Globalization: Challenges and Opportunities**

*Professor Mome Spasovski has had a long and successful career as a lecturer and researcher in the field of public health and health management. He has also held several managerial positions within the higher education system. He is currently the Director of the Institute for Social Medicine at the Medical Faculty-Skopje and he previously served as the Vice Rector of the University Saint Cyril and Methodius-Skopje, and as the Vice Dean of the Medical Faculty in Skopje.*

*His work on developing and implementing public health programs, program management, program and community outreach in the Republic of North Macedonia is particularly notable. Professor Spasovski has conducted research projects on the use of tobacco among the population and among physicians in Macedonia, healthcare organization and evaluation, universal healthcare coverage, management of human resources in the healthcare, project on prioritizing and healthy planning in the local communities and has published extensively.*

*He is also actively collaborating with the Henry Ford partnership with the Faculty of Medicine, Centers for Disease Control and Prevention (CDC) in Atlanta and the World Health Organization (WHO).*

## PRESENTERS



**Stephen Boakye Ansah**  
ERCICRLSH1926051

### **Impact of Motivation on the Performance of Public Health Practitioners in Ghana, a Case Study in the Asokwa West District**

**Stephen Boakye Ansah**  
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#### **Abstract**

For the past few years, there have been several research articles that have been published and reviewed on employee motivation at the workplace. The ability of an organization to well motivate its human resource, thus employee will help improve the progress and achievements of the firm in the long run. This has therefore been a major concern for researchers as to how well motivated employees enhance productivity compared to employees with minimal or less motivation. Employee motivation and performance are very important factors to be considered in sustaining an organization of which managers are very much aware. Motivating employees in an organization needs to be a regular routine and must happen frequently within the organization. In the long run, motivation can be considered as an essential tool for the success of the organization. Employees can be motivated both intrinsically and extrinsically. Extrinsic motivation can be in the form of a reward given to employees for the achievement of a particular objective while intrinsic involves the self-desire to achieve a particular goal by an employee. This study focuses and addresses the influence of employee motivation such as rewards, gifts, salary increment, good working conditions and self-desire instinct and determination by an individual employee to achieve a particular goal help improve performance and productivity, resulting in the overall success of the organization. Data will be collected from public health practitioners in Ghana, within the Asokwa West District such as nurses, doctors, medical laboratory technicians, midwives, pharmacists, dentists, staff and management at the Ghana health service in the district, with different levels of salary structure and working conditions by taking into consideration their age, gender and the duration for which they have been working for the Ghana health service.

**Keywords; Employee Motivation, Employee Performance, Public Healthcare Practitioners**



**Mostafa Moin Uddin**  
ERCICRLSH1926053

### **Use of Incident Command System (ICS) in a Developing Country: Experience from Rohingya Crisis Management in Bangladesh**

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#### **Abstract**

Bangladesh bears the double burden of extreme exposure and high vulnerability to both natural and man-made disasters. In 2017 due to geopolitical conflicts, an enormous influx of Forcibly Displaced Myanmar Nationals (Rohingyas Refugee) from Myanmar to Bangladesh created massive humanitarian crisis. The scope of this project was to assess the Rohingya crisis situation and work with the district health office to introduce a proper Incident Command System (ICS) approach in order to achieve system efficiencies and improve management capabilities of the government.

Bangladesh had never been used incident command system as a standardized approach to the command, control and coordination of emergency response providing a common ground within which responders from multiple agencies can be effective. While assessing the command and control structure in Civil Surgeon office Cox's Bazar, we observed that weaknesses in incident management often led to misunderstanding, lack of accountability, and communication challenges resulting in system inefficiencies with missed opportunities. Based on our situations assessment findings we realized and implemented a comprehensive incident command and management approach in Chittagong and Cox's Bazar to fill the gaps and address the crisis management challenges that were faced by the CS offices during that time.

	<p>IMPACT team, trained by US CDC, implemented a pilot ICS training for the CS staff and succeeded in securing policy commitment from the Civil Surgeon to adopt the ICS approach, expand the model to sub-district levels and ultimately help pave the way to adoption of a proper ICS model in other districts. The IMPACT team will continue to advocate for development of ICS policy on national levels and provide the technical assistance required to translate the policy into action at the ground level in future.</p> <p><b>Keywords:</b> Incident Command System, Emergency, Crisis Management, Refugees</p>
<p><b>Samyog Uprety</b> ERCICRLSH1926054</p>	<p><b>Study on Knowledge and risk factors related to Diabetics and Hypertension among the Diabetes patient attending BPKIHS</b></p> <p><b>Samyog Uprety</b> School of Public Health and Community Medicine, B.P. Koirala Institute of Health Sciences, Dharan, Nepal</p> <p><b>Tushar Banerjee</b> School of public Health and Community Medicine, B.P. Koirala Institute of Health Sciences Ghopa, Dharan, Nepal</p> <p><b>Samyog Uprety</b> School of public Health and Community medicine, B.P. Koirala Institute of Health Sciences Ghopa, Dharan, Nepal</p> <p><b>Dharnidhar Baral</b> School of public Health and Community medicine B.P. Koirala Institute of Health Sciences Ghopa, Dharan, Nepal</p> <p><b>Nilamber Jha</b> School of public Health and Community medicine, B.P. Koirala Institute of Health Sciences Ghopa, Dharan, Nepal</p> <p><b>Abstract</b></p> <p><b>Research objectives:</b> To know about the information related to diabetes and hypertension among diabetes patients attending BPKIHS and to know the risk factors associated to diabetes and hypertension among patients. <b>Methodology:</b> A cross sectional study was conducted in BPKIHS hospital in Dharan of Eastern Nepal. The study population included the diabetic patients who attended the diabetic clinic in BPKIHS. Simple Random sampling technique was used to select the Diabetic patients attending the diabetic clinic of BPKIHS. Pretested Semi structured questionnaire was provided to the participants and face to face interview was done. <b>Findings:</b> Majority of the participants belonged to the age group of 40-49 years with the mean age of 47.48 years and SD of 9.6. Knowledge regarding diabetes and hypertension, all the participants were aware of the higher blood glucose level in case of diabetes mellitus in the body. The most common symptom according to the respondents is headache followed by palpitation and the rest mentioned Shortness of breath as the symptom of hypertension. The knowledge regarding risk factors, most common ailment that could occur in a diabetic along with high BP is heart attack (70%) followed by kidney problems (18.8%), stroke (7.5%), most of them mentioned that obesity is associated with hypertension while all of them believed that doing exercise is helpful in the dreadful conditions like hypertension. <b>Future outcomes:</b> Patient knowledge about disease can play a vital role in imparting education to the diabetic and hypertensive patients. Strategies to modify lifestyle which help in control of hypertension and diabetes include providing the leaflets as well as direct educational programs.</p> <p><b>Keywords:</b> Diabetics, Hypertension, Dharan</p>
<p><b>Anup Ghimire</b> ERCICRLSH1926055</p>	<p><b>Prevalence of Undiagnosed and Uncontrolled Hypertension and Access to Health Care among Residents of an Urban Area of Eastern Nepal</b></p> <p><b>Smriti Mayur Kasaudhan</b> Jounior Resident, School of Public Health and Community Medicine, B. P. Koirala Institute of Health Sciences, Dharan, Nepal</p>

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**Abstract**

**Research Objectives:** To estimate the prevalence of undiagnosed and uncontrolled hypertension, and its associate factors among residents of an urban area of eastern Nepal

**Methodology:** Cross-sectional study was conducted in 5 wards of Itahari sub metropolitan city of eastern Nepal, among 1161 participants, using population proportionate to sample size sampling technique. Face to face interview was conducted with participants for data collection with the help of semi-structured questionnaire and physical measurements like blood pressure, weight and height were taken. Descriptive and inferential statistics were used where ever applicable.

**Findings:** Total prevalence of hypertension was 26.5% (undiagnosed 11.0% and previously diagnosed 15.5%). Among diagnosed, 76% had uncontrolled blood pressure and 56.70% were taking anti-hypertensive medicine and 7.8% were Ayurvedic medicine. More than 70% participants preferred private health facility for treatment and 22.7% had faced financial barrier to seek health care. About 64.0% of participants did not visit health services or had visited only once in past six months. Increasing age, BMI, smoking status and positive family history were found to be significantly associated with hypertension.

**Research Outcomes:** Prevalence of hypertension is high and awareness regarding available health services in local Primary Health Center and its utilization is lacking among participants

**Future Scope:** On the basis of research finding need to create awareness program to disseminate the knowledge of availability of health care service in PHC and their utilization and regular screening program to find out hidden cases should carried out in community.

**Keywords:** Health Care Access, Undiagnosed Hypertension, Urban area, Prevalence

**Leoba Nyathi  
ERCICRLSH1926059**

**Rural Women's Perspectives of Cardiovascular Diseases: A Study of Gwanda South Rural District, Zimbabwe**

**Nyathi Leoba**

**Institute for Gender and Youth Studies, University of Venda (corresponding author)**

**Thobejane Tsoaledi. Daniel**

**Institute for Gender and Youth Studies, University of Venda**

**Tshitangano Takalani. Grace. Takalani.T  
Department of Public Health, University of Venda**

**Abstract**

**Historically, the cardiovascular disease (CVD) has internationally been viewed as a man's disease. This is witnessed by the high number of males who have fallen victim to this scourge. However, with rapid changes in today's societies, the disease has increasingly become a public health concern among women also. This study aimed to explore gender-based perspectives of CVD with**

particular reference to women. The study was guided by a feminist perspective where theories of gender such as social construction feminism, intersectionality and standpoint theory, were employed as a theoretical framework. In this process, the research endeavoured to unearth some contradictions inherent in the manner in which women view CVD. The population of the study comprised of females aged 21-60 years residing in Gwanda South Rural District of Zimbabwe. A phenomenological design was adopted and this guided the qualitative data collection and analysis. Purposeful sampling technique was used to select 16 participants for semi-structured interviews and six participants for focus group discussions. Data were analysed using thematic analysis which is an essential tool for qualitative data analysis. Data were presented and discussed as themes and subthemes. The measures of trustworthiness were also considered. Ethical considerations like informed consent, confidentiality and anonymity and no harm to participants were ensured. The following seven themes were derived from the study; women's knowledge of CVD, causes of CVD, prevention of CVD, perceived effects of CVD, difference in experiences of CVD, assistance of women with CVD and management of CVD. Findings revealed that women had limited knowledge of most CVDs but were familiar with hypertension and stroke. Various symptoms of CVD were identified. Women also showed a bit of knowledge on the causes and prevention of CVD in women. It was concluded that women do not have adequate knowledge of CVDs. A lot should be done by the government and other stakeholders to improve their cardiovascular health.

**Keywords:** Cardiovascular Disease, Gender Roles, Experiences, Health, Knowledge, Perceptions, Social Structures, Women

Suocheng Wei  
ERCICRLSH1926060

**FSH Receptor Binding Inhibitor Up-regulates ARID1A and PTEN Genes Associated to Ovarian Cancers**

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**Abstract**

**Objective** The experiments were conducted to determine if the FSH receptor binding inhibitor (FRBI) impacts the expression levels of ARID1A and PTEN in ovaries and blood, as well as expressions of FSHR gene and proteins. **Methods** Mice in FRBI-1, FRBI-2, FRBI-3, and FRBI-4 groups were intramuscularly injected with 10, 20, 30 and 40mg/kg, respectively, for five consecutive days. Western blotting and qRT-PCR were utilized to determine expression levels of ARID1A and PTEN proteins and mRNAs. **Results** Serum ARID1A and PTEN concentrations of FRBI-4 group were higher than CG and FSH group ( $P<0.05$ ). FSHR mRNA levels of FRBI-2, FRBI-3 and FRBI-4 groups were less than that of CG and FSH group on day 15 ( $P<0.05$  or  $P<0.01$ ). Expression levels of FSHR proteins of FRBI-3 and FRBI-4 groups were lower than those of CG and FSH group ( $P<0.05$ ). Levels of ARID1A and PTEN proteins of FRBI-3 group were greater than CG on days 20 and 30 ( $P<0.05$ ). FRBI doses had significant positive correlations to levels of ARID1A and PTEN proteins. Additionally, ARID1A and PTEN had negative correlations to FSHR mRNAs and proteins. **Conclusions** A high dose of FRBI treatment could promote the expression levels of ARID1A and PTEN proteins in ovarian tissues. FRBI increased serum concentrations of ARID1A and PTEN. But, FRBI depressed expression levels of FSHR mRNAs and proteins in the mouse ovaries.

**Keywords:** ARID1A; PTEN; FSH Receptor Binding Inhibitor; Ovarian Cancer



Manindra Rajak  
ERCICRLSH1926061

**Using Interpretive Structural Modelling to Determine the Relationships among mobile health adoption barriers in India**

**Manindra Rajak**

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**Krishnendu Shaw**

**Assistant Professor, Dept. of Management Studies, Indian Institute of Technology- Indian School of Mines, Dhanbad, Jharkhand, India**

**Abstract**

There are many expectations for Mobile Health (mHealth) to transform traditional health into a sustainable and prevention-based system. Unfortunately, it has not reached its scale of adoption many had desired for, because of the existence of adoption barriers. The present study has developed a framework for mHealth adoption barriers using an integrated approach of interpretive structural modelling and MICMAC analysis. To develop the framework, the contextual relationship among the parameters has been defined by discussions with experts from industry and academics. In the present study, Lack of Perceived Ease of Use, Conservative Nature, Low Customer Retention, Lack of Behavioural Intention, and Lack of Social Influence are found to be primary leading parameters that influence the remaining parameters of the system directly or indirectly. Therefore, in the first stage, these parameters should be taken care of. Whereas Lack of Technology Awareness has been found to be lagging parameter which has a minimum impact on the system. Results from this framework can help the healthcare policymakers to tackle issues related to mHealth adoption in India.

**Keywords: mHealth; Interpretive structural modelling; MICMAC, mHealth adoption barriers**

Said Belghit  
ERCICRLSH1926061

**Production of Antifungal Compounds Antagonists Candida Albicans from Twostrains of Streptomyces Using Date Juice**

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**Abstract**

The aim of our work is the production of antifungal compounds against the pathogenic Yeast *Candida albicans* from two strains of *Streptomyces* G24 and G68 using a date juice with lower market value. Both strains G24 and G68 had grown on this medium but at low dilution D4. The addition of a mineral nitrogen source  $\text{NaNO}_3$  at this dilution was necessary to have more growth abandonment. The production kinetics of anti-*Candida* activities on solid media: date juice, ISP2 and Bennett showed that the day of maximal production on both ISP2 and Bennett media is the 2nd day. However, in the middle date juice is the 6th day. Concerning the kinetics of production on the liquid medium, the activities are maxima on the three media at the 4th day of incubation. The calculation of the averages of the inhibition zones showed that the medium of the date juice is better compared than the two media ISP2 and Bennett that is liquid or solid. The antifungal molecules of the two strains are only appeared extractable by the n-butanol solvent. The HPLC profile of crude butanolic extract of strain G24 showed the presence of the 5 fractions. One of them is active against *Candida albicans*.

<p><b>Alfred Quarcoo</b> ERCICRLSH1926064</p>	<p><b>Keywords:</b> Date Juice, Antifungal Compounds, Streptomyces, Candida Albicans</p> <p><b>Energy Consumption and Economic Growth: Testimony of Selected Sub-Saharan Africa Countries</b></p> <p><b>Alfred Quarcoo</b> Institute of Applied System Analysis, Jiangsu University, Zhenjian, Pr China</p> <p><b>Abstract</b></p> <p>The main purpose of this paper is to examine the causal relationship between energy consumption and economic growth in Sub-Saharan Africa using panel data techniques. An annual data on energy consumption and real GDP per capita spanning from 1990 to 2016 from the WDI database was used. The results of the ADF unit root test shows that the series for all countries are not stationary at levels. However, the log of economic growth in Benin and Congo become stationary after taking the differences of the data, and log of energy consumption become stationary for all countries and LGR in Kenya and Zimbabwe were found to be stationary after taking the second differences of the panel series. The findings of the Johansen cointegration test demonstrate that the variables LEC and LGR are not co-integrated for the cases of Kenya and Zimbabwe, so no long-run relationship between the variables were established in any country. The Granger causality test indicates that there is a unidirectional causality running from energy use to economic growth in Kenya and no causal linkage between EC and GR in Benin, Congo and Zimbabwe.</p>
 <p><b>Monica Opara</b> ERCICRLSH1926065</p>	<p><b>Effectiveness of health education and insecticide treated nets in combating malaria in sub-Saharan Africa: systematic review and meta-analysis</b></p> <p><b>Opara Monica Onyinyechi</b> PhD candidate, Department of Community Health, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia, Serdang, Malaysia</p> <p><b>Ahmad Iqmer Nashriq Mohd Nazan</b> Department of Community Health, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia, Serdang, Malaysia</p> <p><b>Lye Munn Sann</b> Department of Community Health, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia, Serdang, Malaysia</p> <p><b>Sri Ganesh a/l Muthiah</b> Department of Community Health, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia, Serdang, Malaysia</p> <p><b>Suriani Ismail</b> Department of Community Health, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia, Serdang, Malaysia</p> <p><b>Background</b></p> <p>Malaria poses a public health challenge in endemic African countries. Global estimates of malaria indicate that at least 3.3 billion people are at risk of being infected with malaria and 1.2 billion are at high risk. According to World Health Organization (WHO), insecticide treated nets (ITNs) are well-known malaria prevention tool for people at risk of contracting the disease, especially those living in malaria-endemic countries. The review investigates the effectiveness of health education strategies to increase ownership and usage of ITNs in combating malaria in sub-Sahara African region.</p> <p><b>Method</b></p> <p>A literature search was conducted using Science direct, CINAHL, PubMed, Prisma, Pico, Cochrane library and PsycINFO databases to retrieve articles published between 2000 until 2017. Studies that reported on malaria prevention and control interventions using health education in combination with insecticide treated nets were included. To reduce heterogeneity and limit the scope of this review, those without the health education component and not conducted in sub-</p>

Saharan Africa were excluded. The results returned a total of 683 articles of which 571 were excluded for not meeting the inclusion criteria. The remaining 112 articles in addition to three more identified through reference-list checking and two through experts' recommendation were reviewed. Eighty-eight more studies were excluded for not meeting the eligibility criteria and 11 others after examining supplementary information received from the study authors. Eighteen studies met the eligibility criteria but of these, two were ongoing and one required further information from the authors. Fifteen studies were included in the final review.

**Results**

The search yielded a total of 683 studies and after the screening, fifteen studies were reviewed and reported based on the preferred Reporting Items for Systematic Review and Meta-analysis and 9 studies were eligible for enrolment meta-analysis. Four studies used educational interventions to promote ITNs usage. Two studies looked at the appropriate ITNs strategies use while two studies focused on intervention on knowledge and practices towards malaria transmission, prevention and treatment, signs and symptoms of malaria. The final three others looked at the strategies for implementation of malaria education. We used a random-effects model for the meta-analysis. The pooled estimate for the standardized mean difference from baseline using the random-effects model was 0.02% (95% CI, -0.01 to 0.24) for the overall intervention effect (p= 0.02). We examined statistical heterogeneity by using the I2 statistic and by calculating approximate 59% prediction intervals and the Q value was statistically significant with chi-square= 17.08 (p<0.002, 7df).

**Conclusion**

These findings show that health education was slightly effective for improving ITN use and there are various strategies to increase the health education and insecticide treated nets intervention in sub-Saharan Africa were identified. The use of evidence-based health educational messages has contributed to the success of health education in combating malaria in sub-Saharan countries.

**Keywords:** Systematic Review, Health Education, Insecticide Treated Nets, Sub-Saharan Africa

**Assessment of Ghanas National Health Insurance Efficiency Based on Complex System Analysis**



**Peter Kaba**  
ERCICRLSH1926071

**Peter Kaba**

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**Abstract**

This study sought to assess the efficiency of the National Health Insurance Scheme (NHIS) in Ghana. We first introduced the concept behind the NHIS, we then talked about the various functions of the National Health Insurance Authority (NHIA) since its creation and its source of funding. We identified some major challenges faced by the Health insurance scheme and its current situations. Literature on Health insurance were enumerated to identify and analyzed the method used to tackle various topic on Health Insurance. Data was obtained from the National Health Insurance Authority (NHIA) and the Ministry of Health (MoH) of Ghana Database. From the network analysis methodology, we used the closeness average, the information centrality and the Eigen values to identify which zone is more efficient than others. Regression methodology in R software was used to study and analyze the number of professional staffs, funding and referrals within each zone and assess the overall NHIA network model. Our result showed that the number of professional staff and funding are insignificant in some zones. However, the overall analysis shows that the number of professional staff has a positive influence on the NHIA network; there is a positive flow of information within the network, which facilitate the number of referrals within the network. Funding is insignificant because the first aim of the NHIA is to meet subscribers' satisfaction and alleviate the cost of treatment. A number of recommendations were made in light of the findings of the study which is summarized into the establishment of a stronger expenditure control system for long-term sustainability, the expansion of health insurance scheme package and the establishment of a computerized system that can effectively control and prevent the inflation of claims by service providers.

**Keywords:** National Health Insurance Authority, Efficiency, Complex network, Assessment, Decision –Making

**Ching-Kuo Wei**  
ERCICRLSH1926073

**Impact of Consumers Perceived Risk and Involvement on Micro-plastic Surgery Purchase Intention**

**Ching-Kuo Wei**

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**Abstract**

Medical cosmetology is gaining more and more attention in Taiwan, and micro-plastic surgery is a major consumption trend. Facing more and more medical cosmetology consumers, what are their points of focus? According to the literature review, it is found that the perceived risk and the degree of involvement are the main points. Therefore, this study wants to explore the influence of the perceived risk and the degree of involvement of the medical cosmetic consumers in Taiwan's Greater Taipei area on their purchase intention of micro-plastic surgery.

In this study, the validity of the questionnaire was examined by experts, and the overall reliability of Cronbach's Alpha was 0.923 for the pre-test and the post-test. Therefore, the questionnaire has reliability and validity. 400 questionnaires were distributed, 368 (92%) were valid samples, and SPSS was used for statistical analysis.

The main findings are: there was a significant positive impact between consumer involvement and purchase behavior, and consumer perceived risk had a significant negative impact on purchase behavior. Therefore, increasing consumers' involvement in medical cosmetology and reducing perceived risks can increase consumers' purchase intention of micro-plastic surgery.

This study suggests that different interference variables can be discussed in the future, such as the brand image of the clinic and the attitude of the service staff, etc., to have more analysis on the consumers of the cosmetic micro-plastic surgery.

**Keywords:** Medical Cosmetic Micro-Plastic, Perceived Risk, Degree Of Involvement, Willingness To Purchase

Tesfaye Dagne  
Weldemaium  
ERCICRLSH1926074

**Quality of Family Planning Services at Health Posts and Associated Factors in Jimma Zone, South West Ethiopia**

Andualem Tamiru

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Fikiru Tafesse

Tesfaye Dagne

**Abstract**

**Background:** Population growth is a major concern in developing countries in view of its impact on broader socio-economic development. In Sub-Saharan Africa, including Ethiopia continued high fertility levels, along with declining mortality rates, have resulted in a wide gap between birth and death rates. Good quality of care in family planning services help individuals and couples to meet their reproductive health needs safely and effectively.

**Objective:** To assess quality of family planning services and associated factors at health post in Jimma zone, south west of Ethiopia, 2018.

**Methods:** Institution based cross-sectional study was conducted (qualitative and quantitative) at health post of Jimma zone from March 13-April 13, 2018. For quantitative method, samples of 633 respondents were selected using simple random sampling technique. Data was collected by using a pre-tested questionnaire. Data were checked for missing values and outliers, and analyzed using SPSS 21.0. Logistic regression analyses were used to see the strength of association between independent and dependent variables using odds ratios and 95% of confidence intervals. The qualitative data were collected using an open ended tool and analyzed thematically.

**Results:** The study showed that health professionals (46.1%) were the major source of information about family planning for clients and 68.5% of clients reported that they have received clear explanation about family methods. Most respondents (57.2%) considered the health care provider greeting as good and a friendly way. Most of health post had private examination room (67.2%), functional BP (54.09%) and electricity services (62.2%). More than three fourth (80.8%) of health post had shortage of progestin-only oral pill. This study showed that 42.8% of clients were satisfied with family planning services which significantly associated with clients' age from 15-19 (AOR= 6.12[1.63, 22.8]) and 20-24 (AOR=2.40[1.25, 4.60]) years, attending family planning education (AOR=1.87[1.09, 3.17]), clients' preference (AOR=1.96[1.24, 3.09]), being Protestant follower (AOR=0.24[0.12, 0.49]) and lowest economic status (AOR= 0.33[0.17, 0.66]).

	<p><b>Conclusions and recommendations:</b> This study indicated that less than fifty percent of clients were satisfied with family planning services and it has significant association with age of clients, clients' preference of family planning methods and attending family planning education. Some clients complained that there was poor health care providers' interaction, limited family planning preference and provision of adequate consultation hour. Majority of health care providers' did not assess the health condition of clients before providing family planning services. Therefore, effective counseling, availing different family planning methods and enhancing family planning education is important to enhance quality of family planning services.</p>
 <p><b>Felix Kwame Nyarko</b> ERCICRLSH1926077</p>	<p><b>Corporate Governance Structure and Intellectual Capital Disclosure: Evidence from Ghana</b></p> <p><b>Felix Kwame Nyarko</b> School of Finance and Economics, Jiangsu University, Zhenjiang, China</p> <p><b>Abstract</b></p> <p>The main aim of this paper is to investigate the extent of the intellectual capital disclosure and the relationship between intellectual capital disclosure and corporate governance variables in Ghanaian listed firms. We tested the following independent variables comprising the various forms of corporate governance structure: board composition, dual role, size of audit committee and frequency of audit committee meetings. A sample of 50 firms listed on the Ghana Stock Exchange was selected. The descriptive statistics, content analysis and linear regression model were performed to analyze the data. Out of the four (4) variables tested, only the frequency of audit committee meetings has significant positive relationship in influencing the level of intellectual capital disclosure in Ghana. The result also found 74.67 percent of the selected companies disclosed intellectual capital in their annual reports. However, the extent of the intellectual capital disclosure among Ghanaian firms is still relatively low (about 4.45 percent). This result also revealed that, most of the Ghanaian firms are aware about the intellectual capital disclosure but however, they are not aware on how to measure, report and disclose this information in their annual report.</p> <p><b>Keywords:</b> Corporate Governance, Intellectual Capital, Structural Capital, Human Capital</p>
 <p><b>Prince Adansie</b> ERCICRLSH1926081</p>	<p><b>New Infinite Families of Congruence for the Number of Tagged Parts over Partitions with Designated Summands</b></p> <p><b>Prince Adansie</b> School of Science, Jiangsu University, Zhenjiang, China</p> <p><b>Abstract</b></p> <p>Recently, Lin introduced a new partition function <math>PDt(n)</math>, which counts the total number of tagged parts over all partitions of <math>n</math> with designated summands. Lin also proved some congruences modulo 3 and 9 for <math>PDt(n)</math>. In this paper, we shall present two new infinite families of congruences modulo 9 for <math>PDt(n)</math>.</p> <p><b>Keywords:</b> Partition With Designated Summands, Tagged Part, Dissection Formula, Congruence</p>
 <p><b>Yuri Lee</b> ERCICRLSH1926092</p>	<p><b>Relationship between Smoking and Lifestyle Factors in Korean Adolescents: The 6, 7th Korea National Health and Nutrition Examination Survey (2015-2016)</b></p> <p><b>Yuri Lee</b> Seoul National University Hospital, Department of Family Medicine, Seoul, Korea</p> <p><b>Abstract</b></p> <p><b>Introduction</b></p> <p>Smoking is an important factor for health. Adolescents are beginning to see dangerous health behaviors such as smoking and drinking. The purpose of this study is to examine the relationship between youth smoking and various lifestyle factors and to consider additional factors necessary for the education of smoking cessation for adolescents.</p> <p><b>Method</b></p> <p>This study is a cross-sectional study using data from a total of 940 adolescents (499 male, 441 male) aged between 12-18 years who participated in the National Health and Nutrition Survey of Korea in 2015-2016. The smoking cessation rate of teenagers was assessed as to whether they had</p>

	<p>ever smoked a cigarette or not, and related lifestyle factors were drinking, sleeping time, stress perception, physical activity, subjective health status and frequency of meals</p> <p><b>Result</b> The results of the smoking related factors showed significant correlation with stress perception, sleeping time, frequency of breakfast, and drinking. (P&lt;0.05)</p> <p><b>Conclusion</b> Adolescent smoking cessation programs require diverse management such as eating habits, sleeping time, drinking, and stress management. A comprehensive smoking cessation education program that takes into consideration various life factors should be developed and managed so that it can be applied to schools. In the future, large-scale cohort studies will be needed to clarify the importance of lifestyle factors.</p> <p><b>Biography:</b> Department of Family Medicine<sup>1</sup>, Seoul National University Hospital, Seoul, Republic of Korea</p>
<p><b>Yu-Jin Cha</b> ERCICRLSH1926058</p>	<p><b>Analysis of A Difference in The Biomechanical Characteristics According to The Habituation by Heights of Shoes: High-Heel and Low-Heel Shoes</b></p> <p><b>Yu-Jin Cha</b> Department of Occupational Therapy, Semyung University, Jecheon, Republic of Korea</p> <p><b>Abstract</b> <b>Purpose of Research:</b> This study was performed to comprehensively investigate whether there is a difference in the biomechanical characteristics according to the habituation by heights of shoes of those who prefer high heeled shoes (“high heeled shoe users”, more than 6cm) and low heeled shoes (low heeled shoe users” lower than 3cm). <b>Methods:</b> With total 37 healthy women in 20s consisting of 19 high heeled shoe users and 18 low heeled shoe users, the comparison analysis were comprehensively performed to check if there is a difference in a level of the biomechanical characteristics through Surface EMG, Foot Pressure analysis, static dynamic balance measurement in order to compare functional variables related between high heeled shoe users and low heeled shoe users. <b>Findings:</b> From the foot pressure analysis between high heeled shoe users and low heeled shoe users, the low heeled shoe users show significantly higher values of peak pressures in lateral forefoot and midfoot areas and wider contact areas in toes and midfoot than the high heeled shoe users. From the EMG comparison, the high heeled shoe users show significantly higher maximum peak EMG in GM than the low heeled shoe user, and from the percentage of maximum voluntary isometric contraction (%MVIC), the high heeled shoe users show significantly higher values of the plantarflexion in GM. For the static balance, the high heeled shoe users show significantly greater values than the low heeled shoe users with eyes open. <b>Conclusions:</b> The study was able to verify that there is a significant difference in biomechanical characteristics such as foot pressure, muscle activation, balance etc. between the high heeled shoe users and low heeled shoe users. Based on the result, this study can be utilized as base data to develop a customized insole which disperses pressure and softens shock absorption of the high heeled shoes. <b>Keywords:</b> Biomechanics, EMG, Foot Pressure, Habituation, High Heels, Muscle Activation, Static Balance</p>
<p><b>Professor Mome Spasovski</b> ERCICRLSH1926062 + <b>Dr. Elena Spasovska</b></p>	<p><b>Health Workforce Mobility and Sustainable Development Goals in North Macedonia: The Problem with the ‘Brain Drain’ of Health Workers</b></p> <p><b>Professor Mome Spasovski</b> Medical Faculty, University of Saint Cyril and Methodius</p> <p><b>Dr. Elena Spasovska</b> University of South Australia</p> <p><b>Abstract</b> <b>Research Objectives:</b> The migration of skilled and highly educated workforce from low and middle-income countries to high-income countries, also known as ‘brain drain’, is one of the most complex aspects of globalisation. The ‘brain drain’ of health workforce poses significant challenges to the health industry and health coverage in source countries. The importance of</p>

health workforce in the context of the SDGs (Goal 3) emphasizes the critical need to “substantially increase health financing and the recruitment, development, training and retention of the health workforce”. This paper aims to critically review trends and factors relating to health workforce mobility in North Macedonia in order to better understand current possibilities and challenges, and to contribute towards informing policy solutions and advancing the 2030 Agenda.

**Methodology:** Data was collected through desk research from three main sources: annual reports on health workforce published by the National Institute for Public Health; “Global health workforce statistics database “- WHO; and the Macedonian Doctors’ Chamber database. Analytical and descriptive methods were used to present the results.

**Findings:** Health workforce density in North Macedonia is 3.79/1000 population. This is less than the minimum threshold of 4.45 per 1000 population set by the World Health Organization to meet the SDG health targets, and it has declined since 2010 when it was 4.8/1000 population. Analysed data shows that the number of medical doctors (299 per 100000 population) does not meet the minimum EU standards for quality healthcare services (360 per 100000 population) Moreover, in the last 8 years almost 10% of the registered licensed medical doctors emigrated from the country and a high proportion of medical students are thinking of migrating after they graduate (35% in 2014). Despite some retention efforts by the Ministry of Health and the Higher Education Sector, the medical brain drain from North Macedonia to the countries of the European Union remains an unyielding trend due to significant push and pull factors including wages, employment, job satisfaction, professional training and promotion opportunities.

**Conclusion:** The major challenges in the health system pertaining health workforce are related to number, quality, distribution, attrition and career path. Future demographic and epidemiological changes will have consequences in which the healthcare systems respond to patient needs. Imperative action and strategy are needed to prevent health professional shortage, and to provide allocation of human resources in order to achieve universal health coverage by 2030. The need for sustainability and systematic strengthening of the health workforce, especially in source countries such as North Macedonia, is national, regional and global concern. While some aspects of this largely depend on the political will of national governments, achieving universal health coverage relies on strong regional and international solidarity and cooperation.

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Customized Exercise Prescription Determination Method based on Decision Tree for Chronic Disease

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**Abstract**

In this paper, we tried to determine the appropriate exercise for chronic disease by comparing the maximum oxygen intake value measured using Decision Tree and the maximum oxygen intake calculated by the formula for estimation of exercise intensity using preliminary heart rate. It is meaningful to suggest a reliable estimation range even at relatively low exercise load. The relative exercise intensity was set by using the Heart Rate Reserve (HRR), and the maximum oxygen uptake was estimated for each exercise intensity section based on the data of 20 men. And it will be useful for the development of personalized group and personalized exercise program that requires repeated exercise evaluation.

**Keywords:** Aerobic Exercise, CART, Decision Tree, Exercise Prescription Strength, Chronic Disease

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