CONFERENCE PROCEEDINGS

Healthcare and Biological Sciences Research Association (HBSRA)

27th International Conference on Healthcare & Life-Science Research (ICHLSR), 30-31 Dec 2017, Bangkok, Thailand

30-31 Dec 2017

Conference Venue
Asian Institute of Technology (AIT), Conference Center, Bangkok, Thailand
KEYNOTE SPEAKER

Senior Lecturer attached to University of Ruhuna, Sri Lanka
Topic: G-protein coupled receptors as targets for antidiabetic therapeutics

Dr Anoja Attanayake has been working as a Senior Lecturer in the Department of Biochemistry, Faculty of Medicine, University of Ruhuna, Sri Lanka. Her research interests are on bioactivity studies of medicinal plant extracts of Sri Lankan origin, isolation and characterization of antidiabetic, antihyperlipidaemic and antioxidant compounds, antidiabetic and nephroprotective mechanisms of natural products; beta cell regenerative effects in animal models and in cell cultures, immunohistochemistry and histopathology in the pancreas of diabetic animal models, chemical standardization of traditional plant remedies. Her research findings have been published in a number of science citation indexed journals, peer review journals and presented short papers in local and international scientific fora. Further, she was able to win several awards related to research findings including a gold medal for the excellent performance during the post graduate study (in generating knowledge that has accepted internationally), post graduate research award of SLAAS, Sri Lanka in 2015, award for the most outstanding young researcher -2016, University of Ruhuna, Sri Lanka etc. Currently she serves as the principal investigator of research projects on bioactivity studies of natural products/medicinal plant extracts in in vivo models, clinical trial of a novel antidiabetic drug of herbal origin etc.
PLENARY SPEAKER

Dr. Hajime Hirao
Department of Biology and Chemistry, City University of Hong Kong, Hong Kong, China
**Evaluation Of A Cluster-Randomized Controlled Trial To Increase Skilled Birth Attendant Utilization In Mid- And Far-Western Nepal**

Bishnu P Choulagai
MPH, Phd. Associate Professor, Institute Of Medicine, Tribhuvan University, Nepal

**Abstract**
Skilled birth attendant (SBA) utilization is low in remote and rural areas of Nepal. We designed and implemented an evaluation to assess the effectiveness of a five-component intervention that addressed previously identified barriers to SBA services in mid- and far-western Nepal. We randomly and equally allocated 36 village development committees with low SBA utilization among 1-year intervention and control groups. Implementation was administered by trained health volunteers, youth groups, mothers groups, and health facility management committee members. Post-intervention, we used mixed-effects regression models to assess and analyze any increase in the utilization of skilled birth care and antenatal care (ANC) services. Interviewees included 1,746 and 2,098 eligible women in the intervention and control groups, respectively. Utilization of skilled birth care and completion of at least one ANC visit increased significantly (OR = 1.50; CI: 1.14-1.97 and OR = 1.48; CI: 1.03-2.14, respectively) as a result of the intervention. Increased age of mother at current childbirth associated with decreased use of ANC services and skilled birth care. Higher age at first childbirth significantly increased the use of ANC services and skilled birth care. The one-year community-intervention was effective in increasing the use of skilled birth care and at least one ANC visit, but was not effective in increasing adequate number of ANC visit. Scaling up of the intervention to other areas with low SBA utilization is recommended to achieve increased use of skilled birth care.

Keywords: cluster randomized controlled trial, evaluation, skilled birth attendants, barrier, Nepal

---

**The Effectiveness Of Fitting Pressure Garments For Minor & Moderate Burn Patients-A Review Of The Literature**

PI-WEN HUANG
Department Of Industrial And Systems Engineering, Chung Yuan Christian University, Taoyuan, Taiwan

Chih-Wei Lu
Department Of Industrial And Systems Engineering, Chung Yuan Christian University, Taoyuan, Taiwan

**Abstract**
Burns reconstruction is like running multiple barriers marathon; it is a long journey of a burn patient conquering various difficulties of healing burn scars. The continued proliferation scars and fear is the greatest enemy. Contracture like burned rubber band, they never have to restore the original flexibility. Pressure garments therapy is the essential care for prevention and treatment of hypertrophic scarring and keloid after burn injury. However, because of the size of the burn area, burns degree, age, race and personal physical condition, it will affect wound healing. Although it represents the standard care for prevention and treatment of HS from burns. In general, the application of 15–25 mmHg pressure is most commonly used in clinic practice. These minor and moderate are burn patients are able to wear pressure garments in the very beginning.
Following the guideline when the scar closed, scars should always be re-evaluated 6 months after burn to determine whether additional scar management interventions are required or whether preventive therapy can be terminated.

Keywords: Occupational Therapists (OT), Hypertrophic Scar (HS), Keloid, Total Body surface area (TBSA), rehabilitation, Pressure Garments (PG), Vancouver Scar Scale (VSS)

Tiet-Hanh Dao-Tran
GICICHLSR1714058

Factors Influencing Post-Traumatic Stress Disorder Among Paramedics

Tiet-Hanh Dao-Tran, Phd
Research Fellow, Centre Of Work, Organisation, And Well-Being, Griffith University, Australia

Keith Townsend, Phd
Associate Professor, Centre Of Work, Organisation, And Well-Being, School Of Business, Griffith University, Australia

Rebecca Loudoun, Phd
Associate Professor, Centre Of Work, Organisation, And Well-Being, School Of Business, Griffith University, Australia.

Abstract
This cross-sectional study aimed to describe work characteristics and their associations with post-traumatic stress disorder among paramedics. The study used phone administrated self-report questionnaires to collect data from 441 stratified random selected participants. Descriptive analysis and multiple steps hierarchical binary logistic regression were used for data analysis. The study found that: (1) paramedics rarely had problems at work, sometimes experienced work-related burn out, somewhat experienced client-related burnout, and had limited supervisors’ support, and psychosocial safety climate; (2) personal burnout, work role, place of work, and psychosocial safety climate were significantly associated with their post-traumatic stress disorder; and (3) there was no interactions between work and personal characteristics. The study’s findings suggest that (1) among paramedics, interventions to improve psychosocial safety climate among are required; (2) reduced personal burnout and increased psychosocial safety climate decreased the prevalence of post-traumatic stress disorder; and (3) individual characteristics did not moderate the associations between work characteristics and post-traumatic stress disorder. More investigation into trauma exposure characteristics, organizational human resource management and their relationships with post-traumatic stress disorder is recommended for future research.

Keywords: ambulance professionals, post-traumatic stress disorder, psychosocial safety climate, workplace, work role.

Health-related quality of life and associated factors among older women in Vietnam and Australia

Abstract
Background: Similarities and differences in health-related quality of life (HRQOL) and associated factors among older women in Vietnam and Australia is limited.

Methods: This cross-cultural comparison study used descriptive analyses, Chi-square, independent t-tests, and General Linear Models (GLMs) to perform data analysis on data of age, marital status, education level, employment status, income, vegetable and fruit consumption, daily physical activity levels, exercise status, BMI, chronic diseases and HRQOL from 305
women in Vietnam and 175 women in Australia aged 60-71.

Results: Women in Vietnam had lower levels of physical health, but similar levels of mental health to those in Australia. In both populations, chronic disease and diet were associated with physical health; physical activity was related to mental health. In Australia, physical activity, exercise, and Body Mass Index (BMI) were also associated with physical health; age, alcohol consumption, and sleep were also linked with mental health. In Vietnam, age and marital status were also related to physical health; chronic diseases and diet were correlated with mental health.

Conclusions: Older women in Vietnam and Australia were different to a certain extent in their HRQOL and the associated factors. Further research into contributions of cultural factors in HRQOL is warranted.

Key words: physical health, mental health, lifestyle, chronic disease, older women, Vietnam, Australia

<table>
<thead>
<tr>
<th>Abel A. Zandamela</th>
<th>Development and validation of a radiomics software platform (AK)</th>
</tr>
</thead>
<tbody>
<tr>
<td>GICICHLSR1714061</td>
<td>Abel A. Zandamela</td>
</tr>
<tr>
<td></td>
<td>Department of Electrical Engineering, The Sirindhorn International Thai-German Graduate School of Engineering, Bangkok 10800</td>
</tr>
</tbody>
</table>

Abstract

Radionics is a non-invasive computer aided technique for high-throughput extraction of quantitative imaging features aiming on the design of mineable data, descriptive and predictive models for decision support. The field of radionics is based on the assumption that the obtained models can provide insights on diagnosis and prognosis. The precision medicine which can be obtained by radionics leads to a constant development of software tools able to support the radionics workflow. We describe and validate the Analysis Kinetic (AK) software platform for texture analysis. AK provides a user friendly and a powerful platform environment for radionics analysis, is highly flexible and developed under the Medical Imaging Interaction Tool (MITK) platform along with QT and C++. AK provides quality assurance for data and feature algorithms: image data, regions of interest, and feature algorithm-related data can be reviewed, validated, and/or modified. More importantly, AK supports elements for collaborative workflows, the consistency of data sharing and the reproducibility of calculation result, are embedded in the AK workflow: image data, feature algorithms, and model validation. AK has already been applied to aid research in wide range of treatments, and is currently in use in many hospitals around China. In summary, AK provides a powerful, convenient, highly flexible, optimizable and common radionics framework which allows researchers to implement different sets of clinical data, and produce prognosis results. The aim of this article is therefore to present the design and validation of the radionics image analysis software (AK) and to draw comparisons with commonly used tools in the radionics field.

Key words: Radiotics, AK, Validation, Machine Learning

<table>
<thead>
<tr>
<th>Jingyuan Liu</th>
<th>Identifying Suspect/Pathologic Fetal Heartbeat Using Artificial Neural Network</th>
</tr>
</thead>
<tbody>
<tr>
<td>GICICHLSR1714063</td>
<td>Jingyuan Liu</td>
</tr>
<tr>
<td></td>
<td>Shanghai Foreign Language School, Shanghai Foreign Language School, Shanghai, China</td>
</tr>
</tbody>
</table>

Abstract

Objective: Cardiotocography (CTG) is a technical means of recording the fetal heartbeat and uterine contractions during pregnancy. The machine used to perform the monitoring is called a cardiotocograph, more
commonly known as an electronic fetal monitor (EFM). This study aims to build a model to identify suspect/pathologic CTG using artificial neural network and compare its performance to logistic regression model.

Methods: A public data was used https://archive.ics.uci.edu/ml/datasets/Cardiotocography. A total of 1950 fetal CTGs were automatically processed and the respective diagnostic features measured. The CTGs were also classified by three expert obstetricians and a consensus classification label assigned to each of them. Classification was with respect to a fetal state (Normal=0; Pathologic=1).

All the records who were eligible were randomly assigned into 2 groups: training sample and testing sample. Two models were built using training sample: artificial neural network and logistic regression. We used these two models to predict the risk of Suspect/Pathologic fetal heartbeat in the testing sample. Receiver operating characteristic (ROC) were calculated and compared for these two models for their discrimination capability and a curve using predicted probability versus observed probability were plotted to demonstrate the calibration measure for these two models.

Results: About 15.1% (n=295) of 1950 records were considered as suspect/pathologic.

According to the logistic regression, FHR baseline, number of accelerations per second, number of fetal movements per second, number of uterine contractions per second were significant predictors of suspect/pathologic CTG. So were number of prolonged decelerations per second, percentage of time with abnormal short term variability, percentage of time with abnormal long term variability, width of FHR histogram, minimum of FHR histogram, number of histogram peaks, histogram mode, minimum of FHR histogram, and histogram variance.

According to this neural network, the top 5 most important predictors were number of accelerations per second, number of prolonged decelerations per second, number of fetal movements per second, histogram variance and number of histogram zeros.

For training sample, the ROC was 0.96 for the Logistic regression and 0.98 for the artificial neural network. Artificial neural network performed better clearly. However in testing sample, the ROC was 0.96 for the Logistic regression and 0.95 for the artificial neural network. Artificial neural network had slightly worse performance.

As to calibration measure, predictions made by the neural network are (in general) less concentrated around the 45-degree line (a perfect alignment with the line would indicate an ideal perfect calibration) than those made by the Logistic model.

Conclusions: In this study, we identified several important predictors for suspect/pathologic CTG e.g., number of accelerations per second, number of prolonged decelerations per second, number of fetal movements per second, histogram variance and number of histogram zeros. We built a model using artificial neural network as well as logistic regression to provide a tool for automatic analysis and identification of suspect/pathologic CTGs. As to performance of these two models, logistic regression had a similar discriminating capability and a better calibration between predicted probability and observed probability.

Gabrielle Ariche
GICICHLSR1714064

Healing Environment in Thailand - From research to practice.

Gabrielle Ariche
Department Of Architecture, Chulalongkorn University, Bangkok, Thailand

Abstract
The importance of designing supportive environments in healthcare
facilities becomes more and more relevant. The patient profile of the 21st century hospital has shifted from the acute to the chronically ill patient. In the coming years, the population of the world will get older and will be often be hospitalized for longer periods of time. These patients will need a supportive environment that promotes physical, emotional and social wellbeing – they will need an Healing Environment (HE). The amount of research devoted to HE has grown tremendously over the last 20 years. Moreover, it presents strong evidence regarding the influence of environmental design on both the patient’s outcomes and the staff’s performance. Design factors such as daylight, colours, artwork and auditory factors can reduce stress, anxiety, sleep disorders, pain and more. However in practice this valuable knowledge is generally ignored.

The aim of this research is to present existing knowledge by an extensive literature review of over 100 research papers and through a series of interview sessions with active Thai architects in the healthcare facilities design field, to shed light on the limitation and priorities of the design process that might have led to this gap. The paper concludes with some suggestions for the future.

Non-formal CNE program barriers to participation: A comparative study among hospital nurses of two provinces in Pakistan

Zafar Iqbal Channa
Dy. Chief Nursing Superintendent (Dy. CNS) Shaheed Zulfiqar Ali Bhutto Medical University (SZABMU/PIMS), Islamabad, Pakistan

Abstract

Rapid scientific and technological discoveries have increased demands of specialized nursing care. Knowledge and skills can be restored by engaging nurses in a set amount of continuing nursing education (CNE) program activities. Literature suggested that degree or license is not the end point of education after basic nursing study. Apparently, basic nursing education for practice becomes obsolete within five to ten years of graduation. This obsolescence can lead to the poor performance of nurses in clinical practice. Therefore, study was designed to investigate and compare barriers to participation among hospital nurses of two provinces in Pakistan. Cross sectional descriptive study approach used to collect data through convenience sampling technique of three hundred (n=300) nurses. “Barriers to Participation Questionnaire” (BPQ) was used as research tool. Quantitatively, result interpretation was set as “the lower the mean score in each type of barrier, higher the barrier was measured due to reverse Likert scale rating. Generally, administrative barrier was found higher and most prevalent barrier, work-related barrier was more predictive and financial barriers as predicting barrier as compare to family and personal barrier. Data also revealed that Punjab nurses have greater administrative with mean score of 2.16±0.87 and work-related barriers with mean score of 2.43±0.81 than the nurses from Sindh province with mean score of 2.26±0.75 and 2.81±0.90. Regarding financial barrier, both provincial nurses have equal level barriers than the family and personal barriers among nurses of two provinces. To keep nurses connected with advanced knowledge in rapidly changing health care environment, more opportunities of non-formal CNE programs should be provided for all employed nurses in all provinces.

Predicting Risk of Stroke using Artificial Neural Network and Logistic Regression in Big Health Data

Tiankuo Zhang
McCallie School, Chattanooga, US
Abstract

Objective: This study aims to 1) examine the predictors of stroke 2) build a predictive model for risk of stroke using artificial neural network and compare its performance to logistic regression model.

Data and Methods: National Health and Nutrition Examination Survey (NHANES) 2013-2014 data was used in this study. NHANES is a program of studies designed to assess the health and nutritional status of adults and children in the United States.

All the participants who were eligible were randomly assigned into 2 groups: training sample and testing sample. Two models were built using training sample: artificial neural network and logistic regression. We used these two models to predict the risk of stroke in the testing sample. Receiver operating characteristic (ROC) were calculated and compared for these two models for their discrimination capability and a curve using predicted probability versus observed probability were plotted to demonstrate the calibration measure for these two models.

Results:

About 4.55% of 2437 participants experienced stroke, about 5.01% among the female and 4.12% among the male.

According to the logistic regression, the likelihood of being a victim of stroke increased when the participants aged. The risk of stroke decreased as the household income increased. High blood pressure diagnosis, and diabetes diagnosis were associated with higher risk for stroke. Patients with close relative had heart attack had increased risk for stroke. Non-smoker had lower risk for stroke.

According to this neural network, the top 5 most important predictors were alq120q (How often drink alcohol over past 12 mos), race, bpq080 (Doctor told you - high cholesterol level), marriage status, and smq020 (Smoked at least 100 cigarettes in life).

For training sample, the ROC was 0.84 for the Logistic regression and 0.87 for the artificial neural network. Artificial neural network performed better clearly. Meanwhile in testing sample, the ROC was 0.74 for the Logistic regression and 0.72 for the artificial neural network. Artificial neural network had worse performance.

As to calibration measure, predictions made by the neural network are (in general) less concentrated around the 45-degree line (a perfect alignment with the line would indicate an ideal perfect calibration) than those made by the Logistic model.

Conclusions: In this study, we identified several important predictors for being a victim of stroke e.g., high blood pressure, diabetes, alcohol use in the past 12-months, family history of heart attack. This provided important information for patients and physicians to provide timely care for prevention. We built a predictive model using artificial neural network as well as logistic regression to provide a tool for early detection. As to performance of these two models, logistic regression had a similar discriminating capability as well as a better calibration between predicted probability and observed probability.
regression model. Methods: Wisconsin Diagnostic Breast Cancer (WDBC) data was used in this study. Features were computed from a digitized image of a fine needle aspirate (FNA) of a breast mass. They described characteristics of the cell nuclei present in the image.

All the participants who were eligible were randomly assigned into 2 groups: training sample and testing sample. Two models were built using training sample: artificial neural network and logistic regression. We used these two models to predict the risk of breast cancer in the testing sample. Receiver operating characteristic (ROC) were calculated and compared for these two models for their discrimination capability and a curve using predicted probability versus observed probability were plotted to demonstrate the calibration measure for these two models.

Results: A total of 569 patients were included in this analysis, 357 (62.74%) benign, 212 (37.26%) malignant breast cancer patients. According to the logistic regression, number of concave portions of the contour and texture (standard deviation of gray-scale values) were at important predictors for malignant breast cancer. According to this neural network, the top 5 most important predictors were worst area, mean of severity of concave portions of the contour, worst of severity of concave portions of the contour, worst of symmetry, worst of compactness.

For training sample, the ROC was 1.0 for the Logistic regression and 1.0 for the artificial neural network. Artificial neural network performed better clearly. While in testing sample, the ROC was 0.92 for the Logistic regression and 0.99 for the artificial neural network. Artificial neural network had better performance.

As to calibration measure, predictions made by the neural network are (in general) less concentrated around the 45-degree line (a perfect alignment with the line would indicate an ideal perfect calibration) than those made by the Logistic model.

Conclusions: In this study, we identified several important predictors for breast cancer e.g., number of concave portions of the contour, worst of symmetry, worst of compactness. This provided important information for providers and patients for timely accurate diagnosis. We built a predictive model using artificial neural network as well as logistic regression to provide a tool for timely accurate diagnosis. When compared to artificial neural network model, logistic regression had a worse discriminating capability and a better calibration between predicted probability and observed probability.

The Effect of Nurse Telephone Follow up Care on Quality of Life in Patients with Acute Coronary Syndrome after Discharge

Jalali Rostam
Department of Nursing, Faculty of Nursing and Midwifery, Kermanshah University of Medical Sciences, Kermanshah, Iran

Abstract

Background: Acute coronary syndrome is one of the manifestations of coronary heart disease that covers wide range of diseases. Treatment of acute coronary syndrome takes place in both hospital and rehabilitation after discharge. One of the most effective rehabilitation phases is discharge training and post-discharge telephone follow-up by nurses. The aim of this study was to investigate the effect of nurse’s telephone follow up care on quality of life in patients with acute coronary syndrome after discharge. Methods: In a clinical trial, 78 patients with acute coronary syndrome who were referred to Kermanshah Imam Reza hospital selected by convenience
sampling and randomly assigned to intervention and control groups. After telephone follow up in intervention group, the data collected by demographic form and quality of life questionnaire SF-36. Data were analyzed by using t-test, Wilcoxon, Mann Whitney with SPSS software (version 21).

Results: There was a significant difference between the scores of the intervention group before and after telephone follow up intervention (P < 001). There was no significant difference between the two groups before and after the based on general psychological health. After the intervention, based on dimensions of quality of life, there was statistically significant difference between mean scores in intervention and control groups: physical function dimension (P ≤ 0/013), social functioning (P = 0/007), pain (P = 0/006), impairment of role due to physical health (P < 001), impairment of role due to emotional health (P < 001), energy / fatigue (P < 001) and emotional health (p< 001).

Conclusion: Telephone follow-up after discharge by the nurses on the quality of life in patients with acute coronary syndrome is effective and it is recommended for improving the quality of life of these patients as a low-cost method.

Key Words: Telephone follow, Quality of life, Acute coronary syndrome.

Applying chronic care model for chronic diseases

Introduction
The Wagner’s chronic care model was introduced in the mid-1990s based on the review of evidence related to the care of chronic diseases as well as the views of a group of experts. This model has been developed to compensate for shortcoming of acute care models. Since the main duty of caring for chronic patients is related to community-based care teams, it is necessary that this model be taken as a care and follow-up model for practitioners.

Methods
In this review article, we first looked at the keywords with chronic diseases and the chronic care model in the Pubmed, proquest, embase and google scholar databases. The number of related articles was 1533 papers, which after reviewing, 79 papers obtained. After reviewing the articles, it was found that these articles were related to all components of the model.

Findings
Reviewing articles showed in studies that chronic care model was used for chronic diseases, it has successful results, and it was more effective in treating and managing chronic diseases.

Conclusion
Considering that the chronic care model is a comprehensive approach to long-term complications and, in addition to the health system, utilizes community resources and, instead of episodic therapy, seeks to empower and activate the patients. Therefore, it deserves for large projects to change this model as a practical model for chronic diseases.

Key words
Chronic diseases - Chronic care model – Review article.
Pyrolysis Of Animal Bones

Ganzorig Aduuch
Chemistry, Khovd University, Mongolia

Abstract
It was proven that doing a pyrolysis research in animal bones is possible to produce a resin from petroleum similar to the coal. A better solution from an environmental and economic standpoint is to thermally reprocess the animal bone into valuable products such as activated carbon, other solid carbon forms (carbon black, graphite, and carbon fibers), and liquid fuels. Keyword: Small animal bones, pyrolysis

Arezoo Mehrpoya
GICICHLSR1714070

Patient Experiences Of Living With Coronary Stent

Arezoo Mehrpoya
Mscn Psychiatric Nurse, Lorestan University Of Medical Sciences, Khorramabad-Iran.

Rostam Jalali
Phd Of Nursing, Faculty Of Nursing And Midwifery, Kermanshah University Of Medical Sciences, Kermanshah-Iran.

Amir Jalali
Phd Of Nursing, Faculty Of Nursing And Midwifery, Kermanshah University Of Medical Sciences, Kermanshah-Iran.

Mehrdad Namdari
Cardiologist, Lorestan University Of Medical Sciences, Khorramabad-Iran.

Abstract
Introduction: Cardiovascular disease is the most important disorders in the developed world and the main cause of death and disability in all countries considered. Using coronary stent in cardiovascular patients, as an effective treatment, has greatly reduced the requirement for cardiac surgery. The study was carried out to explore lived experiences of patients living with coronary stents.

Methods: The qualitative phenomenological study was done to explore lived experiences of patient with coronary stent. The participants (11 patient) were selected purposively. Data were collected through individual semi-structured in depth interviews. The interviews were analyzed according to Colaizzi’s seven-stage method. Authenticity is demonstrated using Lincoln and Guba four-criteria.

Findings: the mean age of participant was 49.6±11. The researcher obtained as many as 577 codes and having classified, they were decreased to 217 codes. After analysis on data collected about the cardiovascular patients living with stent in their vessels, some basic issues such as concerning about future, social anxiety, supporting, body deformation, life style changes, were obtained. Fundamental themes were anxiety (concern), feel of need and changes.

Conclusion: the result showed an important step to fixing the problems is reducing concerns, increase the level of awareness and satisfy the needs (physical and mental). For improving patient’s health, the rehab and care programs may modify patients’ problems.

Keywords: Phenomenology, Coronary stent, Qualitative research, Heart disease.
Mothers’ Knowledge Regarding Management Of Fever Under Five Year Children In Chalnakhel, Kathmandu

Binu Koirala
Department Of Arts And Humanities

Abstract
Mothers’ often have misperception about childhood fever and little information is available about the management of feverish children. Mother still considered the fever is disease in itself rather than a symptom or sign of illness. Mother still considered the fever is disease in itself rather than a symptom or sign of illness. The objective of this study was to assess mothers’ knowledge regarding the management of fever under five year children at Chalnakhel, Kathmandu. A descriptive cross sectional study was conducted to assess mothers’ knowledge regarding management of fever under five year children. A total of 105 mothers’ were selected using systematic random sampling method. Data were collected by administering a structured interview method. Descriptive statistics was used to analyze the data. Majority of respondents 67% of the mothers’ had moderate knowledge, 30% had inadequate knowledge and 3% had adequate knowledge. Mothers’ are still lacking adequate information about fever. There is still presence of misconception regarding fever and its management in young children. So this research finds the importance of educating mother on fever and its management.

Keywords: Fever, knowledge, management, education

Factor Analysis Associated With Medical Treatment Actions In Breast Cancer Patients At RSUD Prof. Dr. W. Z. Johannes Kupang

Agustinus Ara
Magister Program of Health Community, Nusa Cendana University of Kupang, East Nusa Tenggara, Kupang Indonesia

Breast cancer is the second highest prevalence cancer in Indonesia after cervical cancer. Estimated breast cancer mortality rate in Indonesia is 16.2 per 100,000 population. The main problem in the prevention of cancer today is the information that can not be accounted for developing in the community so that patients do not do the treatment properly and late came in health care facility. This study aims to analyze the relationship between perceived susceptibility, perceived severity, perceived benefit, perceived barrier, cues to action, knowledge, self-efficacy and family support with treatment seeking action in breast cancer patients in RSUD Prof. Dr. W. Z. Johannes Kupang.

The research design used was cross sectional study. The sample is 30 respondents. Sampling technique in this research is total sampling. Data collection was done by filling questioner by respondent. Statistical analysis using correlation test of rho sperman and logistic regression.

The results showed a significant relationship between perceived susceptibility (p = 0.018), perceived severity (p = 0.009), perceived benefit (p = 0.041), perceived barrier (p = 0.036), cues to action (p = 0.002), Knowledge (p = 0,010) and family support (p = 0,036) with treatment seeking action. While self-efficacy did not show any relationship (p = 0,439).

Multivariate analysis with logistic regression showed that the perceived severity variable was the most dominant variable related to treatment seeking action. With p value = 0,019 and OR equal to 12.451. The conclusion, there is a relationship between perceived susceptibility, perceived severity, perceived benefits, perceived barriers, cues to action, knowledge, self efficacy and family support with treatment seeking action.
And the perceived severity variable to be the most dominant variable associated with treatment seeking action. Suggestion for the community to use health service facility as the main choice in health and medication examination, for service provider to improve promotion and preventive service in effort of breast cancer prevention and early diagnosis discovery. Keywords: perceived susceptibility, perceived severity, perceived benefits, perceived barriers, cues to action, knowledge, self efficacy, family support and treatment seeking action.

Ethyl acetate fraction of Senna alata flower modulates diabetes mellitus, dyslipidemia and oxidative stress in diabetic rats model

Nkchinyere J. Uwazie
Phytomedicine, Toxicology, Reproductive and Developmental Biochemistry Research Laboratory, Department of Biochemistry, University of Ilorin, P. M. B 1515, Ilorin, Nigeria.

Toyin M. Yakubu
Phytomedicine, Toxicology, Reproductive and Developmental Biochemistry Research Laboratory, Department of Biochemistry, University of Ilorin, P. M. B 1515, Ilorin, Nigeria.

Omotayo A. T. Ashafa
Phytomedicine and Phytopharmacology Research Group, Department of Plant Sciences, University of the Free State, Qwaqwa Campus, Phuthaditjhaba 9866, South Africa

And

Olakunle T. Ajiboye
Antioxidants, Redox Biology and Toxicology Research Group, Department of Medical Biochemistry, College of Health Sciences, Nile University of Nigeria, Abuja, Nigeria

Abstract
Herbal remedies have been known to be efficacious in diabetes mellitus management. However, the bioactive principle could remain unknown, such is Senna alata flower. Thus, this study gives insight to the bioactive components of Senna alata flower. Crude aqueous extract of SAF (20.45 g) was partitioned using various solvents. Male Wistar rats (42) were randomized into six groups of seven rats each. Animals in group 1, the control, received distilled water. Rats in groups II-VI were made diabetic by intra-peritoneal injection of 150 mg/kg body weight of alloxan. The untreated diabetic control group was in group II; groups III-V were treated with 75 mg/kg body weight of the solvent partitioned fractions from Senna alata flower aqueous extract while group VI received 2.5 mg/kg of glibenclamide. In-vivo antioxidant and anti-diabetic activities were also evaluated in alloxan-induced diabetic rats. The fractions from Senna alata flower aqueous extract had varying anti-diabetic and anti-oxidant activities. Worthy of note is the ethyl acetate fraction which most significantly ameliorated the alloxan-induced diabetic alterations in fasting blood glucose, lipid profile and carbohydrate metabolism enzymes. Moreover, it significantly reversed the decrease in the activities of reactive oxygen species.
detoxifying enzymes in the liver of alloxan-induced diabetic rats. Conclusion: Ethyl-acetate (EtoAc) fraction from Senna alata flower contains antioxidant and anti-diabetic principles as evident in the positive alterations in enzymes linked with diabetes mellitus.

**Optimization Of Community Nurses On Reducing Morbidity And Mortality From Diabetes Mellitus Through Family Approach In Indonesia**

Annida Falahaini  
Destin Kurniawati, Intan Mulia Sari, Tiara Salma Yanthy  
Faculty Of Nursing, University Of Indonesia

**Abstract**

Diabetes mellitus (DM) is one of the non-communicable diseases that its prevalence continues to higher in the world. WHO estimates the increase number of DM patient from 150 million to its double in 2025. Indonesia as one of developing country is an area with DM sufferers high in worldwide. From those total of DM patients, many of them have not been diagnosed thus lead to high rates of mortality and morbidity. Family, the smallest unit of society, becomes the place of existence of DM patients. It has potential to be empowered to achieve good family health status. Friedman (1998) initiated five family functions, including health maintenance. Family health becomes the domain of community nurse work. This article presents an innovation to optimized the role of community nursing in order to improve health services for the community, especially in the handling of chronic diseases such as DM. Method used is comprehensive of analyzed data from scientific journal database in conjunction with the critical thinking of the actual condition about nursing role in family with DM. There are three elements should be considered: policy, nurse as part of health care provider, and family as the primary target of intervention. Government through the health ministry develops policies of DM treatment, it is up to the technical stage of treatment at primary health care facilities. Nurse reaffirmed his knowledge about duties and responsibilities of the community nurse so that motivation arise to show the ideal nurse figure that could help the family handle chronic disease. Nurse strengthen family’s task on health including how to deal with the disease. To conclude, community nurse can be optimized as the way to decrease mortality and morbidity cause by DM through family approach.

**Keyword** diabetes mellitus, community nurses, family.

**Experience of sexual harassment among nursing students in the clinical settings in Private Nursing Colleges**

Shobha Gaihre  
Psychology Department, Tribhuvan University, Kathmandu, Nepal

**Abstract**

Background: Over the last decade, the pervasiveness and the cost of sexual harassment, a manifestation of sex-based discrimination, has become a growing concern at the national and international level. Literature has explored the sexual harassment rate is high in nursing students and in nurses. This study aims to assess the experience of sexual harassment among nursing students in the clinical settings.

Methods: A cross-sectional research design was carried out in 2017 in three private nursing colleges, Kathmandu. Census method was used to recruit 232 respondents. A structured questionnaire was used for data collection. Data was objectively analyzed in SPSS full version 16.

Results: Nursing students experiencing sexual harassment were 67 (28.9%). Respondents were found to be sexually harassed mostly by relatives of
patient as 14.2%. The common type of harassment was staring at the body repetitively and in a suggestive manner (19.4%). Mostly harassment occurs at night shift (Between 7pm- 8am) (15.5%) and in ward (25.4%). Regarding effects of Sexual Harassment, approx (21.1%) of the nursing students had repeated disturbing memories and thoughts about a sexual harassment incident. Approximately (18.5%) respondents revealed that no action taken to investigate the incident, (1.3%) told the incidents, were investigated by management/employer and union. Majority of nursing students did not report sexual harassment because of (13.8%) were afraid of negative consequences, (9.5%) did not know who to report to, (3.0%) felt ashamed and (1.7%) felt guilty. Sexual harassment were significantly associated with age, education, age group of patient (p=0.05) p>.021, .007, .005 respectively. Conclusion: Sexual harassment of any type ranging from staring to verbal abuses. Hospital don’t have concrete policies and regulations regarding harassment. Hence, there should be legal policy against sexual harassment in every hospital.

Keywords: Private Colleges, Sexual Harassment, Nursing students.

### Computational Studies of Enzymes and Enzyme-like Inorganic Systems

<table>
<thead>
<tr>
<th>Hajime Hirao</th>
</tr>
</thead>
<tbody>
<tr>
<td>GICICHLSR1714051</td>
</tr>
<tr>
<td>Department of Biology and Chemistry, City University of Hong Kong, Hong Kong, China</td>
</tr>
</tbody>
</table>

**Abstract**

We use computational chemistry techniques such as quantum chemistry, multiscale QM/MM and QM/MM approaches, and many other advanced computational chemistry techniques to study biological (metallo)enzymes. Despite the complexity of biological systems, we show that computational chemistry is capable of providing valuable atomic-level insights into their chemical reactions. By applying computational chemistry techniques to other non-biological systems, we are also trying to understand the differences between biological and non-biological systems. In addition to applying computational chemistry to specific problems, we are developing efficient computational methods and algorithms, in the hope that our new computational methods will expand the capability of computational chemistry and thereby enable one to simulate the behavior of complex molecular systems with higher reliability and predictability in the future.

### Production of human insulin-like growth factor-I by using transgenic rice cell suspension culture as a production platform technology

<table>
<thead>
<tr>
<th>Yong-Suk Jang</th>
</tr>
</thead>
<tbody>
<tr>
<td>GICICHLSR1714054</td>
</tr>
</tbody>
</table>

**Department of Molecular Biology and the Institute for Molecular Biology and Genetics, Chonbuk National University, Jeonju 54896, Korea**

**Chung-Hyeon Choe**

**Jina Kim**

**Sun-Hee Jang**

**Tae-Ho Kwon**
Department of Molecular Biology and the Institute for Molecular Biology and Genetics, Chonbuk National University, Jeonju 54896, Korea

Abstract
Insulin-like growth factors (IGFs) are mitogenic polypeptide growth factors capable of stimulating proliferation and survival of various cell types, including muscle, bone, and cartilage tissues. IGFs are similar to insulin in their structure and function, but have much higher growth-promoting activity than insulin. Consequently, IGFs are very useful growth factors in various purposes including stem cell technology and disease therapy. In the present study, we report the production of human insulin-like growth factor-I (hIGF-I) by using transgenic rice cell suspension culture as a production platform. Plant expression system has several advantages for the production of recombinant proteins such that it is safe from animal-derived pathogen contamination, it can produce the recombinant proteins with post-translational modification, and the production cost using the system is very inexpensive. In order to express hIGF-I with high-level in plant system, we created a full-length codon-optimized hIGF-I gene based on rice (Oryza sativa L.) codon usage. The synthetic hIGF-I gene was subcloned into the plant expression vector containing sugar starvation-inducible promoter, RAmy3D, and then introduced into rice calli via Agrobacterium-mediated transformation. The transgenic rice cell lines with stable integration and transcriptional expression of the introduced hIGF-I gene were obtained and the transgene insertion and expression was confirmed by genomic DNA PCR and Western blot analysis. Finally, suspension rice cell line expressing hIGF-I was established and the production of the recombinant hIGF-I from the transgenic rice cell suspension culture was confirmed. (This study was supported by the provincial government of Jeollabuk-do, 20170329-C1-015.)

Keywords: human insulin-like growth factor-I, plant cell, recombinant protein, therapy

Volker Schulte
GICICHLSR1714055

Employer Branding and Employability - Survey on Labeling Healthy Workplaces in Europe

Volker Schulte
School of Business Institute of Management, University of Applied Sciences Northwestern Switzerland FHNW, Windisch Switzerland

Marc Aeschbacher
School of Business Institute of Management, University of Applied Sciences Northwestern Switzerland FHNW, Windisch Switzerland

Abstract
Health is the most important requirement for workability and employability in aging societies with a growing lack of a qualified workforce. In this context employers try to attract their companies through specific employer branding and through Workplace Health Promotion Labels. This survey gives an overview on different types of labels for sustainable employability and occupational health.

In European countries presenteeism and absenteeism is increasing due to psycho-social disorders. Europe faces structural and long-term changes in working conditions and working environment. Working life changed dramatically within three decades. In general, acceleration of the pace of life, work intensification, constant time pressure, multitasking and life-long learning is essential to maintain job security. In order to resist those pressures, employers start to improve their image by fostering health at the workplace as well. Therefore, workplace health promotion programmes have become very popular in the last two decades.

27th International Conference on Healthcare & Life-Science Research (ICHLSR), 30-31 Dec 2017, Bangkok, Thailand
Asian Institute of Technology (AIT), Conference Center, Bangkok, Thailand
| George HS Singer  
GICICHLSR1714056 | Preventing and Treating Post-Partum Depression and Psychological Distress in Parents of Very Low Birth Weight Infants Served in Neonatal Intensive Care Units  
George HS Singer  
Ph.D. Professor  
Givertz Graduate School of Education University of California, Santa Barbara Santa Barbara, CA 93106  

Abstract  
This paper presents a review of the literature on the research on preventing and treating postpartum depression (PPD) in parents of Very Low Birth Weight Infants Served in neonatal intensive care units (NICU). PPD has been linked to several negative impacts on developing infants and on the lifetime mental health of mothers. Infants of mothers with PPD are at higher than normal risk of insecure attachment and cognitive developmental delay as well as social and behavioural problems lasting into early adulthood. Mothers who experience PPD after the birth of VLBW infants are at high risk of repeated episodes of Major Depression. Current research indicates that the risk ratio of major depression in mothers of infants born weighing less than 1500 grams is 1.6 compared to women in the general population. Emerging evidence also suggests that the birth of VLBW infants induces psychological trauma in some mothers and fathers resulting in Post-Traumatic Stress Disorder (PTSD). Research on psychological and social interventions delivered during and soon after hospitalization suggests that PPD can be prevented and effectively treated for many mothers. This population is underserved in the US and other nations. The purpose of this paper is to review the treatment literature and identify common elements in effective prevention and treatment approaches. Research syntheses indicate that effect sizes for treatments are small to medium; there is room for improvement in treatment programs. The review is intended for researchers and practitioners to provide some guidance as to the kinds of social and psychological supports that can be provided by physicians, nurses, and mental health professionals during and after hospitalization in addressing this growing population.  
Key Words: Very Low Birth Weight, Post-partum Depression, Treatment, |
| Annida Falahaini  
YRSICICHLSR1714051 | Optimization Of Community Nurses On Reducing Morbidity And Mortality From Diabetes Mellitus Through Family Approach In Indonesia  
Annida Falahaini  
Faculty Of Nursing, University Of Indonesia  
Destin Kurniawati  
Faculty Of Nursing, University Of Indonesia  
Intan Mulia Sari  
Faculty Of Nursing, University Of Indonesia  
Tiara Salma Yanthy  
Faculty Of Nursing, University Of Indonesia  

Abstract  
Diabetes mellitus (DM) is one of the non-communicable diseases that its prevalence continues to higher in the world. WHO estimates the increase number of DM patient from 150 million to its double in 2025. Indonesia as one of developing country is an area with DM suffers high in worldwide. From those total of DM patients, many of them have not been diagnosed
thus lead to high rates of mortality and morbidity. Family, the smallest unit of society, becomes the place of existence of DM patients. It has potential to be empowered to achieve good family health status. Friedman (1998) initiated five family functions, including health maintenance. Family health becomes the domain of community nurse work. This article presents an innovation to optimized the role of community nursing in order to improve health services for the community, especially in the handling of chronic diseases such as DM. Method used is comprehensive of analyzed data from scientific journal database in conjunction with the critical thinking of the actual condition about nursing role in family with DM. There are three elements should be considered: policy, nurse as part of health care provider, and family as the primary target of intervention. Government through the health ministry develops policies of DM treatment, it is up to the technical stage of treatment at primary health care facilities. Nurse reaffirmed his knowledge about duties and responsibilities of the community nurse so that motivation arise to show the ideal nurse figure that could help the family handle chronic disease. Nurse strengthen family’s task on health including how to deal with the disease. To conclude, community nurse can be optimized as the way to decrease mortality and morbidity cause by DM through family approach.

Keyword diabetes mellitus, community nurses, family.

LISTENERS

Dorukhan Aşantal  
Agriculture, Ege University, İzmir /Turkey  
GICICHLRS1714052

Gali Magaji  
Public Health, Stafford University, Uganda  
GICICHLRS1714060

Harpreet Kaur  
Departure Of Health Science, University Of Malaysia, Kuala Lumpur, Malaysia  
GICICHLRS1714062

Ferhi Walid  
Faculty of Medecine Monastir, Tunise, Faculty of Medecine Monastir, Tunise, Kasserine, Tunisia  
GICICHLRS1714072

Alireza Hashemi  
Vascular Surgery, Clinique Vauban, Valenciennes , France  
GICICHLRS1714073

Yung-Cheng Chen  
Cv, Femh, Taiwan  
GICICHLRS1714076

Kaci Zohra  
Department of Medicine, University of Algiers, Algiers, Algeria  
GICICHLRS1714081

Dr. Nikhil Joshi  
Hamptons Private Practice, Canada  
GICICHLRS1714078

Dr. Anand Joshi  
Alberta Health Services, Canada  
GICICHLRS1714079

Mrs. Samrudha Jaydhav  
Medical Student, Canada  
GICICHLRS1714080