

2013

Health & Medical Sciences Abstracts

First Annual International
Conference on
Health & Medical Sciences
6-9 May 2013, Athens, Greece

Edited by Gregory T. Papanikos

THE ATHENS INSTITUTE FOR EDUCATION AND RESEARCH



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Abstracts
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Preface

This abstract book includes all the summaries of the papers presented at the *1st Annual International Conference on Health & Medical Sciences, 6-9 May 2013*, organized by the Health Research Unit of the Athens Institute for Education and Research. In total there were 31 papers, coming from 13 different countries (Australia, Canada, China, Czech Republic, Kuwait, Poland, Qatar, Russia, Saudi Arabia, Spain, Switzerland, UEA, UK and USA). The conference was organized into 8 sessions that included areas of Health & Medical Sciences and other related fields. As it is the publication policy of the Institute, the papers presented in this conference will be considered for publication in one of the books of ATINER.

The Institute was established in 1995 as an independent academic organization with the mission to become a forum where academics and researchers from all over the world could meet in Athens and exchange ideas on their research and consider the future developments of their fields of study. Our mission is to make ATHENS a place where academics and researchers from all over the world meet to discuss the developments of their discipline and present their work. To serve this purpose, conferences are organized along the lines of well established and well defined scientific disciplines. In addition, interdisciplinary conferences are also organized because they serve the mission statement of the Institute. Since 1995, ATINER has organized more than 150 international conferences and has published over 100 books. Academically, the Institute is organized into four research divisions and nineteen research units. Each research unit organizes at least one annual conference and undertakes various small and large research projects.

I would like to thank all the participants, the members of the organizing and academic committee and most importantly the administration staff of ATINER for putting this conference together.

Gregory T. Papanikos
President

Athens Institute for Education and Research
Human Development Research Division
Research Unit of Health



1st Annual International Conference on Health & Medical Sciences
6-9 May 2013, Athens, Greece

PROGRAM

Conference Venue: [St George Lycabettus](#), 2 Kleomenous Street, 106 75 Kolonaki,
Athen, Greece.

Organization and Scientific Committee

1. Dr. Gregory T. Papanikos, President, ATINER.
2. Dr. George Poulos, Vice-President of Research, ATINER & Emeritus Professor, University of South Africa, South Africa.
3. Dr. Paul Contoyannis, Head, Health Research Unit, ATINER & Associate Professor, McMaster University, Canada.
4. Dr. Zoi Boutsioli, Deputy Head, Health Research Unit, ATINER & Instructor, Open University of Greece.
5. Dr. Panagiotis Petratos, Vice President of ICT, ATINER & Associate Professor, Department of Computer Information Systems, California State University, Stanislaus, USA.
6. Dr. Nicholas Pappas, Vice-President of Academics, ATINER & Professor, Sam Houston University, USA.
7. Dr. Chris Sakellariou, Vice-President of Finance, ATINER & Associate Professor, Nanyang Technological University, Singapore.
8. Dr. Stevan Gressit, Medical Director, Office of Adult Mental Health, USA.
9. Dr. Andy Stergachis, Professor, University of Washington, USA.
10. Dr. Daphne Halkias, Fellow, Institute of Coaching at McLean Hospital, Harvard Medical School, USA.
11. Dr. Melina Dritsaki, Research Fellow, Brunel University, U.K.
12. Dr. Stefanos Nastis, University of Wyoming, USA.
13. Dr. Efstathios Polychronopoulos, Health Services Researcher, Old Dominion University, USA.
14. Ms. Angeliki Polychronopoulou, Hospital Governor (CEO) Psychiatric Hospital "Dromokaiteion", Greek Department of Health, Athens, Greece.
15. Ms. Angeliki Laiou, Ph.D. Student, University of Tuscia, Italy.
16. Mr. Apostolos Tsiachristas, Junior Research Fellow, Institute for Medical Technology Assessment, Erasmus University Rotterdam, the Netherlands.
17. Ms. Lila Skountridaki, Researcher, ATINER & Ph.D. Student, University of Strathclyde, U.K.
18. Mr. Vasilis Charalampopoulos, Researcher, ATINER & Ph.D. Student, University of Strathclyde, U.K.

Administration

Fani Balaska, Stavroula Kiritsi, Eirini Lentzou, Konstantinos Manolidis,
Katerina Maraki & Celia Sakka

C O N F E R E N C E P R O G R A M

(The time for each session includes at least 10 minutes coffee break)

Monday 6 May 2013

08:30-09:00 Registration

09:00-09:30 Welcome and Opening Remarks

- Dr. Gregory T. Papanikos, President, ATINER.
- Dr. Zoi Boutsoli, Deputy Head, Health Research Unit, ATINER & Instructor, Open University of Greece.

09:30-11:00 Session I: General Medical Issues

Chair: Dr. Gregory T. Papanikos, President, ATINER & Dr. Zoi Boutsoli, Deputy Head, Health Research Unit, ATINER & Instructor, Open University of Greece.

1. *Gloria Ho, Professor, Albert Einstein College of Medicine, USA. Epidemiological Studies on the Role of Inflammation in Colorectal Cancer Risk.
2. Steven Oberhelman, Professor, Texas A & M University, USA. Anatomical Votive Reliefs as Evidence for Specialization at Healing Sanctuaries in the Ancient Mediterranean World.
3. *Mary Rogge, Associate Professor, Texas Tech University, USA. Pathways to Obesity: Implications of a Shifting Obesity Paradigm for Health Care Research.

11:00 -12:30 Session II: Quality in Health and Medical Services

Chair: *Gloria Ho, Professor, Albert Einstein College of Medicine, USA.

1. Sandra Reilly, Associate Professor, University of Calgary, Canada & Leianne Vye-Rogers, Professor, University of Calgary, Canada. Linking the Academic and Helping Communities into a Best-Practice Community to Improve the Health Outcomes for Isolated Families.
2. Mary Ellen Walker, Registered Nurse, University of Saskatchewan, Canada & June Anonson, Associate Professor, University of Saskatchewan, Canada. Democracy and Access to Health Services. (Monday 6 May 2013)
3. Abdalla Abdelwahid Saeed, Consultant, King Fahad Medical City, Riyadh, Saudi Arabia. Consumers' satisfaction with Primary Health Care Services in Riyadh, Saudi Arabia.
4. Mary Lou King, Assistant Professor, University of Calgary-Qatar, Qatar, Stephanie Tappa Daya, BScN Student, University of Calgary-Qatar, Qatar, Reem Jumah, BScN Student, University of Calgary-Qatar, Qatar, Salma Khan, BScN Student, University of Calgary-Qatar, Qatar, Jamila Hassan, BScN Student, University of Calgary-Qatar, Qatar, Aasma Hassan, BScN Student, University of Calgary-Qatar, Qatar, Sajjad ur Rahman, Associate Professor, Clinical Pediatrics & Senior Consultant Perinatal Medicine, Weill Cornell Medical College Qatar and Women's Hospital Hamad Medical Corporation, Qatar. Protecting the Rights of the Unborn Child: Evidence-Based Stillbirth Prevention Strategies.

12:30 -14:00 Session III: Health and Medical Services

Chair: *Mary Rogge, Associate Professor, Texas Tech University, USA.

1. Elizabeth Thomas, Associate Professor, Texas Tech University, USA. Place, Terroir and Healing Landscapes: A Concept Synthesis for Nursing Practice.
2. Jaroslaw Bakowski, Senior Lecturer, Gdansk University of Technology, Poland. Several Notes on Differences between American and European Model of an Emergency Department. An Architect's Point of View.
3. *June Anonson, Associate Professor, University of Saskatchewan, Canada & Mary Ellen Walker, Graduate Student, University of Saskatchewan, Canada. Participatory Action Research: A Strategy to Examine and Support the Health and Well Being of Post Secondary Students. (Monday 6 May 2013)
4. Jacqui Harte, Lecturer, University of Central Lancashire, UK. Advancing Nursing

Practice Through Problem Based Learning (PBL).

5. Dmitry Zvikhachevskiy, PhD Student, Lancaster University, UK, Camila Caiado, Durham University, UK, Stuart Grant, University of Manchester, UK & Graeme Hickey, University of Manchester, UK. The Overall System Architecture of Risk Information System for Cardiac Intensive Care Units.
6. Dennis Rodionov, Ph.D. Student, Lancaster University, UK, Kirili Bushminkin, Ph.D. Student, Lancaster University, UK & George Kolev, Professor, Bauman Moscow State Technical University, Russia. Hybrid Positioning Technique for Indoor Environment.

14:00-15:00 Lunch

15:00-16:30 Session IV: Health and Wellbeing

Chair: Elizabeth Thomas, Associate Professor, Texas Tech University, USA.

1. Aber Ahmed Abdelhameed, Assistant Professor, University of Sharjah, United Arab Emirates. Constant versus Incremental Cardiopulmonary Exercise Test in Evaluation of Functional Capacity in Normal Young Adult.
2. Isabell Verdier-Buschel, Researcher, University of Basel, Switzerland. The Protection of Human Well-Being by the Law: How Do Judges Participate?
3. *Kader Parahoo, Professor, University of Ulster, UK, Eilis McCaughan, Professor, University of Ulster, UK, Suzanne McDonough, Professor, University of Ulster, UK, Jane Noyes, Professor, University of Ulster, UK, Cherith Semple, Cancer nurse specialist, South Eastern Health & Social Care Trust, UK & Elizabeth Halstead, Researcher, University of Wales, UK. Psychosocial Interventions for Men with Prostate Cancer.
4. Eurah Goh, Professor, Kangwon National University, South Korea & Gyeongsil Lee, Doctor, Seoul National University Hospital, South Korea. Carbohydrate and Depression: the Much Carbohydrate, the More Depressive?

21:00-23:00 Greek Night and Dinner (Details during registration)

Tuesday 7 May 2013

08:30-10:00 Session V: Health and Medical Education

Chair: *Kader Parahoo, Professor, University of Ulster, UK

1. Jeffrey Johnson, Director, Eastern Virginia Medical School, USA. Standardized Patients in Art Therapy and Counseling Education: A Phenomenological Study.
2. Luz Celine Arat - Cabading, Ph.D., RN, CCRC, Nursing Instructor, University of Guam, USA. Wellbeing, Approaches to Learning and Leadership Practices of Doctoral Students in Davao Region.
3. Rick Fothergill, Lecturer, University of Central Lancashire, UK. Cognitive Behavioural Therapy Skills for Student Nurses.

10:00 -11:30 Session VI: General Nursing Issues

Chair: Jeffrey Johnson, Director, Eastern Virginia Medical School, USA.

1. Estelle Codier, Associate Professor, University of Hawaii, USA. Emotional Intelligence in Health Care.
2. Heidi Gonzalez, Nursing Instructor, Valdosta State University, USA. Will There Be a Nurse for Me?
3. Emily Doe, PhD Student, University of Northampton, UK, Julie Turner-Cobb, University of Bath, UK & Mike Osborn, Royal United Hospital, UK. Stress in the 'Rabbit Warren': Understanding the Impact of the Physical and Social Environment on Nurses in the Neonatal Intensive Care Unit (NICU).

11:30 -12:30 Session VII: Pharmaceuticals

Chair: Estelle Codier, Associate Professor, University of Hawaii, USA.

1. Rachel Mack, DNP, APRN, C-NP, Clinical Instructor of Nursing, Oklahoma City University: Kramer School of Nursing, USA. Decreasing Prescription Drug Abuse in the Clinical Setting.
2. Christina Holt, Faculty Physician & Research Director, Maine Medical Center, USA, Emily Bourret, Doctor of Pharmacy Candidate, University of New England, USA, Kenneth McCall, Associate Professor, University of New England, USA, & Chunhao Tu, Assistant Professor, University of New England, USA. Predictors of Prescription Drug Overdose Death in the Maine Prescription Monitoring Program.
3. Camila Carneiro da Silva Caiado, Researcher, Durham University, UK, Graeme Hickey, Biostatistician, University of Manchester, UK, Stuart Grant, Honorary Clinical Fellow Cardiovascular Surgery, University of Manchester, UK, Dmitry Zvikhachevskiy, Ph.D. Student, Lancaster University, UK & Garik Markarian, Professor, Lancaster University, UK. Hospital Online Uncertainty and Stability Estimation.

12:30-14:00 Session VIII: IT in Health and Medicine

Chair: Luz Celine Arat - Cabading, Ph.D., RN, CCRC, Nursing Instructor, University of Guam, USA.

1. Kirili Bushminkin, Ph.D. Student, Lancaster University, UK, Denis Rodionov, Ph.D. Student, Lancaster University, UK & Denis Kolev, Professor, Lancaster University, UK. Distributed Storage Modelling for Medical and Healthcare Applications.
2. Tsampikos Georgallis, Ph.D. Student, University of Southampton, UK, Daniel Schoth, Researcher, University of Southampton, UK & Christina Lossi, Lecturer, University of Southampton, UK. The Therapeutic Benefits of Attentional Bias Modification Training (ABMT) in People with Chronic Pain.
3. Dmitry Kangin, Ph.D. Student, Bauman Moscow State Technical University, Russia & George Kolev, Professor, Bauman Moscow State Technical University, Russia. An Improved Modification of the Neocognitron Neural Network with FFT Convolution for Medical Image Classification and Analysis.
4. Ya-Ping Sun, Endowed Chair Professor, Clemson University, USA. Fluorescent Carbon Dots for Bioimaging and Beyond.
5. Sergio Delgado, Professor, Cincinnati Children's Hospital Medical Center, USA. What's Your Angle? Bringing Clarity to Complex Clinical Presentations by Integrating Psychodynamic, Family Systems, Medico-Legal and Ethical Lenses.

14:00-15:00 Lunch

17:30-20:30 Urban Walk (Details during registration)

21:00- 22:00 Dinner (Details during registration)

Wednesday 8 May 2013

Cruise: (Details during registration)

Thursday 9 May 2013

Delphi Visit: (Details during registration)

Abeer Ahmed Abdelhameed

Assistant Professor, University of Sharjah, United Arab Emirates

Constant versus Incremental Cardiopulmonary Exercise Test in Evaluation of Functional Capacity in Normal Young Adult

Purpose; This work was conducted to compare between constant and incremental work rate cardiopulmonary exercise test in measuring the parameters of functional capacity (VO_2 max and anaerobic threshold) in addition to maximum work time.

Subjects: Sixty students of both sex participated in the study their ages ranged from 18 to 24 years old and they assigned into one study group

Method: Each one performed an incremental cardiopulmonary exercise test then after one week performed the constant cardiopulmonary exercise test.

Result: The obtained data showed that the differences in the parameters of functional capacity indices, (VO_2 max, and anaerobic threshold) were higher in constant CPET for all subjects but the values didn't reach a significant difference level ($P = 0.59$ and 0.198) respectively. The result also showed .

Conclusion : study suggested that there were no significant difference between CWR and IWR regarding

June Anonson

Associate Professor, University of Saskatchewan, Canada
&

Mary Ellen Walker

Graduate Student, University of Saskatchewan, Canada

Participatory Action Research: A Strategy to Examine and Support the Health and Well Being of Post Secondary Students

Through a participatory action research project, participants and researchers identified and examined factors that contribute to the health, well-being and quality of life of postsecondary student communities. This project took place on campuses at postsecondary institutions in two rural cities in Canadian. This project included rural areas and First Nations communities in proximity to them. The overall goals of the project were to identify and articulate the health, wellbeing and quality of life status and related needs of individuals and groups that make up the student community and of the student community as a whole; to create positive change in the lives of the participants and each student community as a whole; and to create a framework and set of community-level indicators of health, wellbeing and quality of life of student communities for use with postsecondary students in rural cities.

Project goals were:

- 1) to generate and implement strategies for engaging and collaborating with postsecondary student communities,
- 2) to identify factors that contribute to student and campus health and well-being,
- 3) to create partnerships and take action on identified priorities,
- 4) to develop a framework and set of indicators to measure student and campus health and quality of life, and
- 5) to share findings and outcomes related to processes, strategies, tools, the campus health framework and related indicators.

Focus groups, sharing circles, town hall and campus meetings in addition to a website, facebook and an online survey were research strategies used to support engaging students, gathering information, and moving to action on issues. Improving individual student health, student community well-being and campus quality of life also benefits the broader communities where students reside. The health of populations in rural and northern communities where these students have roots, families and often future careers will also be impacted.

Jaroslav Bakowski

Senior Lecturer, Gdansk University of Technology, Poland

Several Notes on Differences between American and European Model of an Emergency Department. An Architect's Point of View

Despite the thorough and comprehensive description of emergency department models we cannot determine which of the existing solutions is the best, or even the optimal one. In the case of such a complex system as a health care facility there are many crucial factors describing its operation. Moreover, an emergency department is quite unique – its performance can be compared to performance of a whole hospital, as its elements constitute a self-contained entity. In the recent literature there are detailed and particular reviews on various aspects of EDs operation, beyond the strictly medical – also economic, management, and lot more. The paper analyzes architectural solutions and describes functional assumptions for the ED ward.

The general layout of the emergency department and functional links between its elements are the objects of analyses – apart from the subjective and variable aesthetic criteria. Comparison of functional patterns for American and European emergency departments allows defining the essential differences between them and precedes specifications for a general model to determine both solutions and describe their advantages and disadvantages.

Collation of the two models leads to the conclusion that independently evolved and completely different ways of operating of the same functional element have effects on distinct architectural solutions. The question remains which one is more adequate and how to measure its functionality.

Emily Bourret

Doctor of Pharmacy Candidate, University of New England, USA,

Kenneth McCall

Associate Professor, University of New England, USA, Christina Holt,

Faculty Physician & Research Director, Maine Medical Center, USA

&

Chunhao Tu

Assistant Professor, University of New England, USA

Predictors of Prescription Drug Overdose Death in the Maine Prescription Monitoring Program

Context: Prescription drug abuse is escalating in the United States. The US Center for Disease Control reports that deaths from opioid poisoning tripled from 1997 to 2007 and now exceed deaths involving heroin and cocaine combined. Maine has suffered disproportionately from this national crisis. From 1999 to 2004, Maine experienced the nation's third highest increase (210%) in drug poisoning mortality rates behind only West Virginia and Oklahoma. The drug overdose mortality rate in Maine has remained high through 2010, paralleling national trends. In order to combat this epidemic, the Maine Office of Substance Abuse implemented a Prescription Monitoring Program (PMP) in 2004. While thirty-five states have active programs, few studies have investigated controlled substance records in the PMP among decedents of drug overdose.

Objective: To compare controlled prescriptions received by individuals who died of prescription drug overdose per Medical Examiner Case records (OD/MECases) to information provided by the PMP. Our project aims to determine factors predictive of increased risk of overdose death among recipients of controlled prescription medications.

Design and Setting: Secondary analysis of Maine PMP and Medical Examiner overdose death records. Descriptive analysis of decedents compared to all recipients of prescribed controlled substances.

Participants: Deidentified recipients of controlled prescriptions in the Maine PMP and those who died of pharmaceutical overdoses between 2005 and 2010.

Main and Secondary Outcomes: Primary outcomes include rates of prescription receipt from multiple prescribers and pharmacies among all Maine controlled prescription recipients and the OD/MECases. Secondary outcomes include prevalence of prescription drugs received by decedents and correspondence of these prescriptions with substances identified as contributing to their death.

Anticipated Results: Data analysis of 1007 decedents with over 31,000 prescriptions will be compared to over 1 million patients and 13 million prescriptions in the PMP.

Kirili Bushminkin

Ph.D. Student, Lancaster University, UK

Denis Rodionov

Ph.D. Student, Lancaster University, UK

&

Denis Kolev

Professor, Lancaster University, UK

Distributed Storage Modeling for Medical and Healthcare Applications

Many of the distributed systems currently used for medical and healthcare applications were created by inspiration but the real performance of the systems was validated only after system was developed and implemented. In medical cases it's crucial to have storage system with maximized characteristic because time, latency and reliability are playing crucial role in life saving scenario. In cases the performance met the expectations of the developers, the outcome was positive. However, there are numerous cases where the final result didn't meet the expectations of the medical professions. In this paper we describe an alternative approach for developing distributed systems for medical and healthcare applications. The proposed technique is based on developing and optimization of the overall model of distributed storage system by removing gap between theory and practice. Such an approach will allow significant saving in limited resources and will ensure a wide degree of flexibility by supporting numerous options and requirements essential for medical profession. In the main paper we will describe a model for existent storage system termed "Elliptics" [3], shown in Figure 1 below. The model takes into account storage units (HDD), network architecture and fault statistics. Main parameters of system (performance, reliability, time to restore etc.) were evaluated by model and cross verified by comparison with the existing storage systems. The developed model could be used for evaluating the overall system performance and optimization of it's characteristics as well as finding bottle necks and system design errors.

Luz Celine Arat - Cabading
Instructor, University of Guam, USA

Wellbeing, Approaches to Learning and Leadership Practices of Doctoral Students in Davao Region

The trend of doctoral students assuming leadership roles in the society has occurred more rapidly than doctoral students themselves have been able to assimilate. The Association of American Colleges and Universities (2002) identified doctoral students as the leaders of society today and in the future. The Philippine Civil Service Commission has also set post graduate degree as the minimum qualification for higher management positions per Malacanang Executive Order No. 910, s. 2010 which is closely followed by the Philippine Commission on Higher Education (CHED Memorandum Order, 2011). However, the National Center for Education Statistics (2002) noted very few researches focused towards the leadership preparedness of these doctoral students. With the rise of these students into positions of great responsibility, with no likelihood of the trend reversing itself, there is an imperative need to study the leadership skills of these students.

This research study evaluated the leadership practices of the doctoral students in Davao Region, Philippines for school year 2011-2012 with consideration on some important health and education variables which are the students' psychological wellbeing and their approaches to learning. Three (3) standardized instruments were administered to 193 doctoral students of Davao Region which are the RPWB by Ryff (1995), the R-SPQ-2F Scale by Biggs, Kember and Leung (2001), and the LPI by Kouzes and Posner (2005). These instruments were designed to evaluate the doctoral students' wellbeing, approaches to learning and leadership practices. Nominal data gathered were then subjected to appropriate statistical measures.

Results revealed that the doctoral students of Davao Region have a high level of wellbeing, a deep approach to learning and a high level of engagement in leadership practices. Furthermore, a moderately positive significant correlation exists between wellbeing and leadership practices of the doctoral students of the Doctoral Students of Davao Region and a low positive significant correlation exists between their approach to learning and the leadership practices. Finally, the extent of influence of wellbeing and approach to learning to the leadership practices of the doctoral students is noted to be significant.

Thus, the study results pointed out the imperative need to review existing national and global health and education programs in the light of its influence in the development of the students' leadership abilities. Careful and concerted efforts by all stakeholders must be organized for effective outcomes.

Camila Carneiro da Silva Caiado
Researcher, Durham University, UK

Graeme Hickey
Biostatistician, University of Manchester, UK

Stuart Grant
Honorary Clinical Fellow Cardiovascular Surgery, University of
Manchester, UK

Dmitry Zvikhachevskiy
Ph.D. Student, Lancaster University, UK
&

Garik Markarian
Professor, Lancaster University, UK

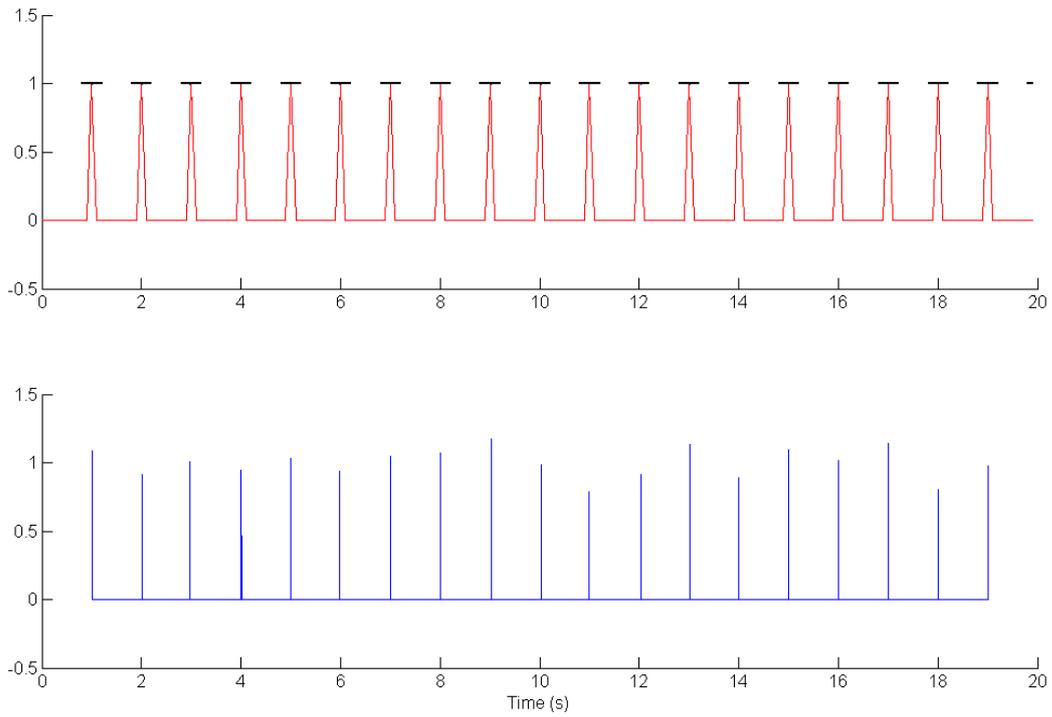
Hospital Online Uncertainty and Stability Estimation

Monitoring the real-time physiological status of patients in intensive care following surgery is essential to predict and prevent deterioration. Here we propose a novel model to monitor patients who undergo major cardiac surgery. Most of the scoring systems currently available are offline and static, cannot detect multi-dimensional trends, rely on arbitrary thresholds to generate alarms and cannot be customized for each patient.

Using a Bayesian modelling approach, we aim to address these issues and create a real-time adaptive dynamic scoring system sensitive to variable interactions and capable of incorporating subjective information about the patient provided by doctors and nurses. By allowing variable interactions, the number of false alarms can be substantially reduced, for example monitor lead disconnections can be easily differentiated from major events. Furthermore, the likelihood of patient deterioration can be more accurately assessed and hence detected earlier when observing trends and joint variations. The vast amount of clinical data gathered prior to surgery can also be used to tailor thresholds and specific levels of normality for each patient. A real-time scoring system can also be used as a sub-model to evaluate the optimal ICU and ward stay times for each patient to minimize the probability of deterioration leading to returns to the ICU or even the theatre. The flexibility and robustness of the Bayesian framework allows for the online system to be used for prediction of specific interventional requirements such as the need for ventilation or kidney dialysis.

Figure 1: Here we have a screenshot of the live monitoring method being applied to the P-waves of one ECG lead. The bottom graph shows a sample of arrivals; the red trace on the top graph shows the expected ideal trace for this patient's P-waves and the bars on the top of each peak show the expected variation for each arrival time. The tolerance for each arrival and the expected amplitude are updated after each heartbeat; the patient's score

is then updated according to the distance from the ideal trace and how often the observed trace fails to fall within the expected boundaries.



Estelle Codier

Associate Professor, University of Hawaii, USA

Emotional Intelligence in Health Care

Emotional intelligence (EI) emerged as a new concept in the field of intelligence theory over the last two decades. In that time, hundreds of research studies across dozens of professions have demonstrated correlation between measured EI and important personal and organizational outcomes. There is significant evidence that measured emotional intelligence (EI) correlates with performance, retention, burn out prevention, stress management, health parameters and important organizational outcome parameters. The purpose of this presentation will be to 1. present an introduction to emotional intelligence as an evolution of intelligence theory, 2. describe 3 widely used models of emotional intelligence, including the instruments used to measure EI, 3. to present an overview of the research literature on EI, 4. To present a summary of the findings of Dr. Codier's research on emotional intelligence in nurses, and 5. to discuss the potential for EI development to positively impact patient safety and clinical outcomes, as well as support change processes in health care organizations.

Sergio Delgado

Professor, Cininnati Children's Hospital Mcedical Center, USA

What's Your Angle? Bringing Clarity to Complex Clinical Presentations by Integrating Psychodynamic, Family Systems, Medico-Legal and Ethical Lenses

This presentation is proposed as a forum for integrating the perspectives of the Psychodynamic Psychotherapy, Family Therapy and Ethical issues , around complex clinical presentations. It represents one step toward achieving consensus derived, best practice standards for assessing and intervening with children and families, in the context of competing agendas and complicated psychodynamic, family, medico-legal and ethical issues. Historically primary care team members have held different and sometimes discrepant views regarding optimal approaches for understanding and responding to complex, psychodynamic, family, medico-legal and ethical dilemmas, commonly faced in clinical practice. The intent of this case conference is to assemble a representative case formulation and decision tree, that could respond to sample cases, in hopes of generating a rich, interesting and collaborative discussion, from which all participants would learn and grow.

Complex cases are defined as when the members of the family and/or the primary treatment team are at odds regarding diagnostic issues or treatment plan.

The presentation will be discussed by perspective from psychotherapy, family therapy and in medico-legal and ethical issues. The presentation will model the development of a treatment plan that seeks to simultaneously integrate the perspectives represented by the 3 treatment models and effectively reconcile complex, competing agendas.

Emily Doe
PhD Student, University of Northampton, UK
Julie Turner-Cobb
University of Bath, UK
&
Mike Osborn
Royal United Hospital, UK

Stress in the 'Rabbit Warren': Understanding the Impact of the Physical and Social Environment on Nurses in the Neonatal Intensive Care Unit (NICU)

Objectives

Due to the highly specialist nursing care required by neonates, staff working in the Neonatal Intensive Care Unit (NICU) can experience high levels of stress. Although much research has examined stress more generally in the nursing profession, comparatively little has focused on the impact of the NICU as a stressful environment for nursing staff. This study aimed to identify the experience and impact of environmental stress on NICU staff.

Design and Method

Semi-structured interviews were conducted with fifteen established members of the nursing staff working within a specialist NICU in a general hospital. The interviews were transcribed and analysed using Interpretative Phenomenological Analysis (IPA).

Results

Three superordinate themes emerged from the interviews: 'The Rabbit Warren,' 'Team Dynamics,' and 'Limited Care.' The superordinate themes of 'The Rabbit Warren' and 'Team Dynamics' also indicated subthemes. These were 'The Environment' and 'Coping' under the overarching theme of 'The Rabbit Warren' and 'Old Staff vs. New Staff,' 'Change,' 'Staff Interaction' and 'Isolation' under 'Team Dynamics.'

Discussion

The ward environment was influential in determining the stress levels of the nurses, particularly in respect to space restrictions the nurses were working within. This created a restriction of care that nurses were able to provide and was particularly distressing for them. Factors such as social interaction also featured highly as impacting on staff well-being. It was concluded that the ward architecture is influential over the social environment, thereby impacting on staff interaction and stress. It is emphasised that the social environment of staff should be remembered when designing hospital wards.

Rick Fothergill

Lecturer, University of Central Lancashire, UK

Cognitive Behavioural Therapy Skills for Student Nurses

Background: Over recent years opportunities to train in Cognitive Behavioural Therapy (CBT) in the UK have increased significantly for post graduate students and many of those are recruited from the field of qualified mental health nurses (MHN), who, once qualified may leave their previous role and start new ones as Psychological Therapists (PT). There appear few opportunities to train to any depth in CBT at undergraduate level, and very few published reports regarding CBT in pre-registration mental health nursing courses. An increase in CBT input at pre-registration level may provide a workforce more able to tackle the high level of mental health morbidity alongside the postgraduates and possibly stem the skill drain of MHNs leaving the profession to become PTs.

Aim: This paper will present the findings from a small scale quasi experimental design study investigating the impact of a 30 hour CBT training course delivered within the third year of a pre-registration MHN programme. The aim was to explore if student nurses, with little previous knowledge or practice in CBT, could be taught fundamental CBT principles and procedures

Methods: A repeated measures, quasi experimental design was used, with an experimental group and a control group. Validated measures were used pre and post training delivery to identify knowledge increases in students. Results were analysed using SPSS.

Findings: Scores achieved using two validated measures suggest that such training can achieve significant procedural and declarative knowledge gains and is valued by the students.

Conclusions: The results indicate that students with little previous experience or knowledge of CBT can be quickly and effectively taught basic foundation level CBT skills that may be useful in clinical practice to help treat the huge range of mental health morbidity.

Tsampikos Georgallis

PhD University, University of Southampton, UK

Daniel Schoth

Researcher, University of Southampton, UK

&

Christina Lossi

Lecturer, University of Southampton, UK

The Therapeutic Benefits of Attentional Bias Modification Training (ABMT) in People with Chronic Pain

The present study examined the therapeutic benefits of Attentional Bias Modification Training (ABMT) on the reduction of physical pain and associated distress, such as anxiety and depression, in people experiencing chronic pain (CP).

Eight individuals with CP attended eight 35-minute ABMT sessions administered twice per week for four weeks in total. During the training sessions, participants were trained to move their attention away from pictorial and linguistic pain-related information through the modified training version of the dot-probe task. Participants' attentional biases and physical pain, as well as their levels of anxiety and depression, were measured before and after our intervention. The findings indicated positive effects in the overall experience of current pain, pain intensity towards affective and miscellaneous aspects of pain, pain severity, pain interference and hospital-related anxiety and depression. Changes in pain intensity towards sensory and evaluative aspects of pain, emotional and long-term anxiety were not observed before and after our intervention. Despite the encouraging outcomes for the potential application of ABMT to chronic pain-related conditions, the study failed partially to provide a solid understanding of the mechanisms of change. Results are discussed in relation to the role of attention to pain, and suggestions for further studies are provided.

Eurah Goh

Professor, Kangwon National University, South Korea

Gyeongsil Lee

Doctor, Seoul National University Hospital, South Korea

Carbohydrate and Depression: The Much Carbohydrate, the More Depressive?

Purpose: The objective of this study was to evaluate the association between carbohydrate intake (% energy adjusted) and depression in Korean population using a representative sample.

Methods: A cross-sectional study was used to evaluate the association between carbohydrate intake and prevalence of depression. Participants were 18,037 (depression: 2,373; non-depression: 15,664) aged from 20 to 64 years from Korean National Health and Nutrition Examination Survey (KNHANES, 2007–2010) who underwent a health interview and 24-hour dietary recall.

Results: The prevalence of depression in KNHANES was 11.7%. Dose-response relationships between carbohydrate and depression are observed in unadjusted model and in income and physical activity adjusted model. After adjusted age, marriage, education additionally, it remains significant only among male, the multivariate-adjusted odds ratio for depression with the highest quartile of carbohydrate intake compared with the lowest was 1.85 ($P_{\text{trend}} = 0.013$). When stratified by town, carbohydrate intake related to depression only in male living in urban, which presumed take simple carbohydrate more than complex carbohydrate.

Conclusion: Authors suggest carbohydrate intake related to depression prevalence in normal population. To reveal which type of carbohydrate contribute depression more, further studies are needed.

Heidi Gonzalez

Nursing Instructor, Valdosta State University, USA

Will There Be a Nurse for Me?

The ultimate goal of the nursing profession is to provide high quality holistic patient-centered care. Nurses are uniting across the nation and the world to deliver evidenced based, best practices to diverse patient populations. Nurses take an avid interest in the family members of patients and the surrounding community; and because nurses know healthier communities make healthier families, they are also taking an active role in policy development and professional advocacy. With these roles come many challenges. The most significant of these is the current worldwide nursing shortage. This paper will discuss current strategies being employed to address the United States nursing shortage, and will outline how other nations are addressing this crisis, as well. The impact of the global nursing shortage on the future of health care and nursing education will be examined.

Based on my review of strategies being used to address the nursing shortage in a variety of nations across the globe, I will: 1) Recommend specific new strategies to be implemented in the United States to address the nursing shortage; and 2) Recommend a broad, consistent global strategy to be implemented internationally, to strengthen, promote, and build the profession of nursing.

Nurses must become involved, both nationally, and internationally in evidence based practice, policy development and professional advocacy. The nursing shortage is a global challenge. This challenge must be addressed to ensure that the nursing profession has a secure future.

Jacqui Harte

Lecturer, University of Central Lancashire, UK

**Advancing Nursing Practice Through Problem
Based Learning (PBL)**

Gloria Ho

Professor, Albert Einstein College of Medicine, USA

Epidemiological Studies on the Role of Inflammation in Colorectal Cancer Risk

Chronic inflammation is implicated in the etiology of colorectal cancer (CRC). However, little is known about whether circulating inflammation/anti-inflammation markers are related to CRC risk. In a case-cohort study nested within the Women's Health Initiative, a cohort of postmenopausal women 50-79 years of age at baseline (1993-1998), we evaluated (1) the associations of circulating inflammation/anti-inflammation markers with CRC risk, and (2) whether inflammation mediated the link between obesity and CRC risk.

In 433 incident CRC cases and 823 subcohort members, baseline plasma levels of immune response biomarkers, namely leptin, adiponectin, resistin, PAI-1, CRP, IL-6, TNF- α , IL-1Ra, and the soluble receptors of IL-6 (sIL-6R and sgp130), TNF (sTNF-R1 and sTNF-R2), and IL-1 (sIL-1R2) were measured by multiplex assays. Insulin and estradiol measured previously were also available for data analyses.

After adjusting for other CRC risk factors (age, ethnicity, smoking, colonoscopy history, and estrogen level), circulating levels of leptin, PAI-1, CRP, and IL-6 were positively associated, whereas adiponectin, sIL-6R, and sIL-1R2 were inversely associated with CRC risk. However, only leptin, sIL-6R, and sIL-1R2 remained significant ($p < 0.05$) after further adjustment for insulin. Mediation analyses showed that leptin and insulin partially explained the association between waist circumference and CRC risk and attenuated it by 25% and 37%, respectively, with insulin being a significant mediator ($p = 0.041$).

Several inflammation and anti-inflammation markers are associated with CRC risk. However, their effects may be mediated through hyperinsulinemia, except leptin, sIL-6R, and sIL-1R2, which may have their own independent effects. Moreover, hyperinsulinemia and hyperleptinemia may partially explain the adiposity association with colorectal cancer. These physiological factors (leptin, sIL-6R, sIL-1R2, and insulin) warrant further investigation for their potential as risk prediction markers or molecular targets for chemoprevention and therapy.

In the lecture, the effects of aspirin on circulating inflammation markers will also be presented.

Jeffrey Johnson

Director, Eastern Virginia Medical School, USA

Standardized Patients in Art Therapy and Counseling Education: A Phenomenological Study

Simulation is used widely in medical and health professions educational programs around the world. The roots of simulation can be traced back many centuries, using techniques such as dissection, anatomical drawings, wax models, and dolls. More recent changes have included the development of standardized patients, increasingly complex mannequins and task trainers, virtual reality, and simulation caves which use cutting-edge audio and video equipment combined with sophisticated computer technology to enable three-dimensional and other forms of high fidelity simulation. Standardized patients (SPs) are individuals trained to simulate specific symptoms or conditions to facilitate structured learning experiences with students.

This qualitative, phenomenological research study used interviews to explore the perceptions of eight first-year graduate art therapy and counseling students regarding training with SPs, in preparation for client interactions during Internships. Students indicated that their training was realistic, increased confidence, reduced anxiety, and provided effective feedback. Future curricular enhancements may include using a broader range of SPs and illnesses portrayed, additional types of simulated facilities, group encounters, and interdisciplinary training. Engaging students in robust simulated experiences can strengthen the educational process in a safe, meaningful, and comparatively low stress environment.

Dmitry Kangin

Ph.D. Student, Bauman Moscow State Technical University, Russia
&

George Kolev

Professor, Bauman Moscow State Technical University, Russia

An Improved Modification of the Neocognitron Neural Network with FFT Convolution for Medical Image Classification and Analysis

This paper presents an improved version of the neocognitron algorithm introduced by Fukushima. This algorithm allowed us to improve the recognition speed and accuracy comparing to both traditional neocognitron and some state-of-art algorithms (multilayer perceptron, topological methods). It can be used as a solution for medical image classification and analysis tasks. As example the neocognitron can be utilized for blood cells recognition.

There are several modifications comparing to the Fukushima's modification of the neocognitron neural network: namely, layer dimensions adjustment, threshold function and connection Gaussian kernel parameters estimation. The width and height are taken into account independently in order to improve the recognition of patterns of slightly different dimensions. The learning and recognition calculations are performed as FFT convolutions in order to overcome the complexity of the neocognitron output calculations.

As the result, the comparison between state-of-art and announced method is performed.

Mary Lou King

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Sajjad ur Rahman

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Protecting the Rights of the Unborn Child: Evidence-Based Stillbirth Prevention Strategies

Education and research opportunities that foster understanding of maternal-child global health issues are imperative for academic and service organizations given globalization and migration trends and the continuing challenge to overcome child health disparities.

A study undertaken in a School of Nursing in the Middle East engaged undergraduate students in an education-research project designed to equip them with knowledge, skills and strategies to address a global health issue. Stillbirth was targeted in view of worldwide statistics (3.2 million/year)¹ and the high rate reported in the Eastern Mediterranean Region (27/1000 total births)². This is the second highest rate in the world, surpassed only by the African region (28/1000 total births) and closely paralleling South East Asian rates (22/1000 total births)².

This research was structured around a theory-based, collaborative partnership model. Collaborating partners included local pediatric leaders and global health maternal-child experts. Students participated in global health seminars co-facilitated by international and inter-professional faculty. Concurrently, they undertook a guided literature review to assess interventions effective in reducing stillbirth. We used the PRECEDE-PROCEED (P-P) model³ to assemble data extracted from the appraisal of 12 systematic literature reviews and 14 in-depth analyses summarizing stillbirth prevention in low, middle and high income countries. The multidimensional elements of the P-P model enabled students to

understand the varied, interrelated influence of culture, context and health conditions contributing to stillbirth.

Ten recommendations with demonstrated impact in preventing stillbirth were highlighted. Several other preventive interventions were identified as having promising or uncertain impact. Literature confirms the need for more rigorous research, as well as universal, standardized reporting and recording of stillbirth data to guide policy, research and practice decisions.

Process and outcome data emerging from this study highlight the value of providing nurses with hands-on experiences that promote research scholarship, nursing leadership and global citizenship.

Rachel Mack

Clinical Instructor of Nursing, Oklahoma City University, USA

Decreasing Prescription Drug Abuse in the Clinical Setting

Prescription drug abuse has been classified as an epidemic in the United States and is the fastest growing drug problem in the nation. Oklahoma has been ranked first in the nation in all categories for the nonmedical consumption of pain relievers. This epidemic is linked to an increase in emergency room visits, overdoses, and unintentional deaths. Regardless of whether the abuser is obtaining these drugs from the street, family and friends, or through doctor shopping, the root of the problem lies ultimately with the healthcare provider who initially prescribed these drugs. This problem could be greatly alleviated through diligent use of a few simple steps. An educational program has been designed to assist healthcare providers in decreasing prescription drug abuse in Oklahoma. The program includes statistical data reflecting the epidemic of prescription drug abuse, understanding the characteristics of the chemically dependent patient, the utilization of the Prescription Drug Monitoring Program and analysis of the data, and a critical pathway for healthcare providers. Integrating this educational program could make great strides toward decreasing this ever-growing national epidemic.

Steven Oberhelman
Professor, Texas A & M University, USA

Anatomical Votive Reliefs as Evidence for Specialization at Healing Sanctuaries in the Ancient Mediterranean World

In the ancient Greek and Roman worlds, people flocked to the healing centers of various gods and goddesses for the cure of diseases and for relief from painful injuries and disabilities. The famous Greek healing god was Asclepius (in Rome called Aesculapius), but other gods had sanctuaries where suppliants could be healed—for example, in Greece Amphiareus, and in Italy Menvra, Diana, and Juno. After recovering health and wellbeing, grateful suppliants dedicated anatomical votive reliefs in the sanctuary to testify to the god's power. I will examine in my paper the thousands of anatomical reliefs found in excavations of many of these sanctuaries. My purpose is to sketch out a map of healing centers that specialized in particular diseases. For example, it seems that of the Asclepian sanctuaries the one in Athens specialized in ocular diseases and that the cult center in Corinth was a place for patients with female breast disease, sterility issues, and genital-urinary problems. In Italy, the cult at Ponte di Nona treated patients with foot and leg injuries as well as headaches and migraines. Even Roman provinces like Britain, Gaul, and Germany had such healing cults. At Wroexter in England an ophthalmic center has recently been discovered; over 100 votives of eyes were contained in the levels. While the injured and the diseased in the classical world had many local healing centers available to them, there were, as I will demonstrate, highly specialized centers of healing. I will conclude with observations on the reasons for specializations at certain centers (e.g., rural vs. urban lifestyles, environmental factors, local disease patterns, etc.).

Kader Parahoo

Professor, University of Ulster, UK
Eilis McCaughan, Professor, University of Ulster, UK
Suzanne McDonough, Professor, University of Ulster, UK

Jane Noyes

Professor, University of Ulster, UK

Cherith Semple

Cancer nurse specialist, South Eastern Health & Social Care Trust, UK
&

Elizabeth Halstead

Researcher, University of Wales, UK

Psychosocial Interventions for Men with Prostate Cancer

There is a need of evidence for practitioners to draw upon when dealing with psychosocial problems of men with prostate cancer. A systematic review of the effectiveness of these interventions will inform us of the nature and quality of the evidence so far. Recommendations for future research will be made to help researchers to address the limitations of previous studies. This may lead to a better use of research funding and better quality evidence.

To evaluate the effectiveness of psychosocial interventions for men with prostate cancer, at all stages of the disease, and in particular to increase knowledge, self-efficacy, and quality of life, and to reduce uncertainty, distress and depression.

Knowledge, distress, uncertainty, depression, self-efficacy, and quality of life will be measured regardless of the variety of tools used in these studies.

All randomised controlled trials comparing one or more psychosocial interventions with a control group, and with or without blinding.

These included all men diagnosed with prostate cancer (at all stages of the disease). Sub-group analyses were carried out to evaluate the effects of the interventions on men at different stages of the disease.

Types of interventions

Psychosocial interventions explicitly using one or a combination of the following approaches.

1. Cognitive behaviour therapy (CBT)
2. Educational
3. Supportive
4. Counselling

Nineteen studies with a total of 2535 men at all stages of prostate cancer were eligible and included in this review. There was a small but significant increase in cancer-specific quality of life at end of intervention (SMD 0.21, 95 % CI :0.04, 0.39) but there was not enough data to draw conclusions for medium (4-6 months) and long term (8-12 months) effects. There was a small but not significant increase in the physical component of general health-related quality of life at end of intervention (SMD=0.15, 95% CI: -0.08, 0.37) and smaller increases in the medium and longer term. There was no change in the mental health component of the general health-related quality of life, post-intervention. Group-based psychosocial interventions appeared to be more effective than individual-based ones. There was also some evidence of improvement in two quality of life domains: urinary and sexual.

There was some indication of a small but significant increase in self-efficacy at end of intervention (SMD=0.22 95% CI = 0.00, 0.40) but not thereafter. However the reliability of this evidence is questionable due to the small sample size in two out of three studies and the very high heterogeneity among these studies. Increase in knowledge was moderate at end of intervention (SMD: 0.52, 95% CI=0.33, 0.71) and small, but significant at 3 months, post-intervention. No data were available for a meta-analysis of the effects on uncertainty. One large reliable study showed a small and significant reduction in uncertainty at end of intervention (effect size = -0.22) but not thereafter. There were no data for a meta-analysis of the effects on 'distress' and a synthesis of the available data shows that there was no change in the level of distress, post-intervention. The results for depression were inconclusive.

Sandra Reilly

Associate Professor, University of Calgary, Canada
&

Leianne Vye-Rogers

Professor, University of Calgary, Canada

Linking the Academic and Helping Communities into a Best-Practice Community to Improve the Health Outcomes for Isolated Families

A crisis nursery and respite care programme in a large Canadian city began as a grass-roots, helping community of volunteers that addressed the problem of child maltreatment. At the outset, they began with three essential beliefs. One, isolated families can learn to improve their effectiveness in dealing with crises. Two, isolated families learn best when exposed to positive experiences that promote self-learning. Three, every helping community has to verify how it benefits society.

At its inception, the community of volunteers reached out to the academic, nursing community to fashion a mission, philosophy and goals. This combination of helping and academic communities developed an ecological, practice model that focused on the role of stress and lack of coping skills in precipitating child maltreatment. This model, with its measureable outcomes, eventually resulted in a best-practice model that now has two decades of research.

The model addresses the interplay of stressors, a lack of resources and coping strategies that often overwhelm isolated parents and that place their children at-risk for maltreatment. To ameliorate their conditions, these isolated families require social support, including efforts to improve personal agency, access to community services and clinical interventions, when necessary.

The best-practice model has, over six years, using a single-group, pre- and post- design, collected data from families (n = 3,394). Outcomes include: stress, positive and negative affect, hopefulness and coping.

In sum, quantitative and qualitative analyses indicate that parents benefit from their experiences at a crisis nursery. The data generally support the thesis that after parents receive social support their stress and negative feelings decrease, their hopefulness, in terms of all sub-factors (cognitive, affective and situational), as well as their coping skills increase. Furthermore, anecdotal data describe families that demonstrate increased resourcefulness in meeting the challenging that occur in their everyday lives.

Dennis Rodionov

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&

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Hybrid Positioning Technique for Indoor Environment

Nowadays, location-aware healthcare services become more and more popular due to obvious advantages to both the patient and care provider. Nevertheless, positioning accuracy in indoor environment is still poor as satellite navigation techniques suffer well known setbacks while alternative indoor positioning technologies require significant infrastructure installation without providing the required accuracy. This is particularly important in hospital environment, where the use of alternative wireless technologies is restricted. The key aim of this paper is to enhance indoor positioning accuracy by combining two different location techniques with prediction algorithm. Although Received Signal Strength Indication RSSI-based positioning technique is well-spread, it has specific areas in building where it works inefficiently. On another hand, magnetic field positioning algorithms have different areas with poor accuracy. In this article the combined method is proposed, which utilizes results from both non-correlating algorithms and achieve better results than any of the ones taken separately. In the proposed algorithm the prediction technique is necessary for data fusion algorithm, which gives knowledge about RF and magnetic field fluctuations in the area where a tracked object can move in the nearest time. In the main paper we shall present the results describing the accuracy of the developed algorithm and its applications to hospital and healthcare environments. Special emphases will be placed on demonstrating advantages of the developed algorithm compared to the conventional state of the art technique utilizing single.

Mary Rogge

Associate Professor, Texas Tech University, USA

Pathways to Obesity: Implications of a Shifting Obesity Paradigm for Health Care Research

Purpose: Obesity is recognized as a global health problem. The calories in-calories out paradigm of obesity has been only marginally successful in guiding obesity prevention or treatment, and fails to explain why some people overeat or under-exercise. The purpose of the research was to identify and organize a new conceptual model of factors associated with the development and progression of obesity based on the pathophysiological bases for adipogenesis.

Methods: Theory synthesis was utilized to organize research findings of adipogenic factors into a model of obesity pathophysiology. A literature review based on search terms “obesity etiology,” “obesity pathophysiology,” and “adipogenesis” was conducted to identify defects in energy homeostasis which may account for excess fat accumulation.

Results: Three pathways were identified by which energy homeostasis may be involuntarily disrupted through genetic and epigenetic influences. Adipose cell dysfunction includes excess adipose cell proliferation due to activation of gene transcription factors (thiazolidinediones, adenovirus-36, fatty acids), and impaired fatty acid liberation and thermogenesis due to beta-adrenergic receptor polymorphisms, and decreased brown fat mass. Neuroendocrine hunger and satiety pathways may be disrupted due to factors including hyperinsulinemia, melanocortin receptor polymorphisms and anti-melanocortin receptor autoantibodies, stress, sleep deprivation, and medications (antihistamines, antipsychotic drugs). Mitochondrial impairment in converting food substrates into cellular energy may result from impaired beta-oxidation of fatty acids, disruption of the tricarboxylic acid cycle by medications (beta adrenergic blockers, tricyclic antidepressants), and environmental exposures (atrazine, dioxin, persistent organic pollutants). A fourth pathway involving chronic inflammation was tentatively identified (gastrointestinal flora).

Conclusion: The model provides a new classification framework for assessing patients and for designing and researching different approaches to obesity prevention and management based on the underlying etiology and pathophysiology.

Abdalla Abdelwahid Saeed
Consultant, King Fahad Medical City, Riyadh, Saudi Arabia

Consumers' satisfaction with Primary Health Care Services in Riyadh, Saudi Arabia

Objectives: The assessment of consumers' satisfaction and factors encouraging utilization of the services provided by the Primary Health Care Centers (PHCCs) in Riyadh city and associated factors.

Methods: Study subjects included systematically chosen adult Saudi consumers visiting 15 randomly selected PHCCs in Riyadh. Data was collected via a self administered pilot tested questionnaire which included socio-demographic, economic and geographical characteristics, and satisfaction with the different services and facilities.

Results: The great majority of the 1675 subjects were males, aged 15 -34 years ,currently married with secondary and above education, government employee The overall average satisfaction score was about 70% (3.48 points out of 5) and was significantly higher among females, visitors with elementary education, PHCCs in the Centre and North zones .Physician attributes showed high satisfaction levels. The most dissatisfying items were related to dental, health education, maternity and some pharmacy and waiting area services. Vaccination services were the most important service for which visitors will opt to visit PHCCs while Maternity services were the least services encouraging utilization of the PHCCs. Suggestions to improve services included improving physical environment , have more experienced doctors and consultants , in addition to improving laboratory and x-ray and particularly dental services and replacing rented PHCCs by purposely built ones.

Conclusion: Overall satisfaction was good, many physician attributes showed high satisfaction levels but certain service areas showed low satisfaction levels such as health education, dental services and maternity services.

Recommendation: Suggestion of visitors should be studied and addressed. Future studies need to consider other aspects of services such health inspectors services.

Ya-Ping Sun

Endowed Chair Professor, Clemson University, USA

Fluorescent Carbon Dots for Bioimaging and Beyond

Semiconductor quantum dots (QDs), especially the highly fluorescent CdSe-based core-shell nanostructures, have generated much excitement for their variety of potential applications in optical bioimaging and beyond. These QDs are widely considered as being more advantageous over conventional organic dyes as well as genetically engineered fluorescent proteins in terms of optical brightness and photostability. However, a serious disadvantage with these popular QDs is their containing heavy metals such as cadmium, whose significant toxicity and environmental hazard are well-documented. Alternative benign (nontoxic) QD-like fluorescent nanomaterials have therefore been pursued, including our reported finding of fluorescent carbon nanoparticles (dubbed “carbon dots”). Carbon dots are surface-passivated small carbon nanoparticles, where the surface passivation is most effective via functionalization with organic or bio-molecules. In addition to sharing some of the major advantageous characteristics of semiconductor QDs, including high photostability, large two-photon excitation cross-sections, and applicability as optical imaging agents *in vitro* and *in vivo*, carbon dots are also non-blinking, readily water-soluble, and nontoxic according to currently available cytotoxicity and *in vivo* (mice) toxicity results. In this talk the current status on the development and understanding of carbon dots will be presented and discussed.

Elizabeth Thomas

Associate Professor, Texas Tech University, USA

Place, Terroir and Healing Landscapes: A Concept Synthesis for Nursing Practice

Purpose: Health and illness are place-encoded, social constructions built from the interface of human populations with the physical environment. Lifeworlds of people reflect human perceptions of place interactions with physical space and time. The purpose of this presentation is to propose a concept of place as an epistemological foundation to nursing.

Method: A concept synthesis was used to explicate the concept of place for integration into nursing and the healing disciplines focused on human health and illness of individuals and populations in the global community. Place emerges when space acquires definition, becoming a landscape-language, reflecting common assumptions about shared physical and social realities. Analytical perspectives used in epidemiology, anthropology, cultural geography, and archaeology provide insights into the concept of place beyond the concept of culture, reflecting the interplay of humanity, topography, climate, and the built environment. The concept of *terroir* reflecting the interplay of biology, geology, climate and human interventions in viticulture and wine making is presented as metaphor and exemplar of place in human health and illness. Similar to the vineyards across diverse geologic terrains and human communities, the creation of healing landscapes is proposed as the work of nursing.

Discussion: The creation of healing landscapes of care resonated throughout Nightingale's work and the profession's theoretical evolution. Place, reflecting a *terroir* understanding of human health and illness is proposed as necessary in nursing to understand the human experience of wellness and illness. Place assessment examines embedded historicity and speaks to the landscape-language discourse of individuals, communities and populations.

Conclusion: A place perspective confronts formulaic thinking in evidence-based practice, a trend that inadequately reflects the complexity of health and illness dynamics between person and environment. Place, the *terroir* of human health and illness, realigns nursing practice to the situated embodiment of human beings, in communities, within physical and social space.

Isabell Verdier-Buschel

Researcher, University of Basel, Switzerland

The Protection of Human Well-Being by the Law: How Do Judges Participate?

Well-being is defined as „the state of feeling healthy and happy“. It is commonly admitted that well-being goes beyond health. Some even argue that it extends to prosperity. In the absence of a legal definition of the term « well-being », it must be questioned whether and if so, to what extent the protection of the well-being of the individual, but also of a State's population is guaranteed by the law. Whereas only few legal sources seem to protect the individual's well-being literally, there are many instruments which contribute implicitly to the objective of promoting human well-being through the law, e.g. texts on the quality of life, human dignity, health, security, privacy, environmental protection.

Whereas the German Federal Constitutional Court decided that registering and processing citizens' data might create a « feeling of permanent surveillance » and « vague threat », the highest Court in the French judiciary recognized the existence of a damage linked to the anxiety of those employees who had been working in establishments which were listed by ministerial order because of their processing of asbestos. According to the Swiss Federal Tribunal the determinant factor for the well-being of a patient is his or her will and not what the doctor considers to be appropriate. This implies that the well-being of the patient might be satisfied by refusing the treatment which doctors consider appropriate.

The European Courts have been dealing with the protection of human well-being in many cases mainly in the environmental and medical fields, but also concerning child protection. Based on case studies our contribution addresses a fundamental research question: how do those who enforce the law (judges), participate in reaching an effective protection of human well-being? What are the criteria which lead the judges' decision-making when individual and collective interests collide?

Mary Ellen Walker

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&

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Democracy and Access to Health Services

The political system of a country influences its policies and resource distribution (Bossert, 1983). The relationship that democratic political systems have with health has received much attention in the literature, especially in the last decade (Mutaner et al., 2011). However, the relationship between democracy and health service accessibility (HSA) has not been the focus of any research studies in the literature examined. A study has been conducted examining the relationship between the Economist Intelligence Unit's Democracy Index scores for countries and the number of physicians, nurses, and hospital beds per 10,000 people. This study may guide researchers and policy makers to the most effective means of enabling access to healthcare. The study is of significance to health care providers, as it will allow for the examination of the political environments where health services are accessed, and it may lead to an understand how the political environment can affect health. This study examines the relationship between democracy and HSA using statistical analysis. Analysis of variance (ANOVA) and multiple regression are used to explore the relationship between democracy and HSA. This research uses the Health Access Livelihood Framework developed by Obrist et al. in 2007 to inform the results. Overall, this study shows that there is a significant difference of HSA in countries with different levels of democracy. This study also identifies which components of a democratic system are most important in predicting the HSA.

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The Overall System Architecture of Risk Information System for Cardiac Intensive Care Units

In this paper we describe a novel technique for risk mitigation in cardiac intensive care units. The technique, termed Integrated Risk Information System (IRIS), is due to be trialled by the University Hospital of South Manchester shortly.

In the main paper we will present the overall IRIS system schematic and present simulation results illustrating the overall system performance and requirements for the communications and remote access component. The developed system diagram is presented in Figure 1.

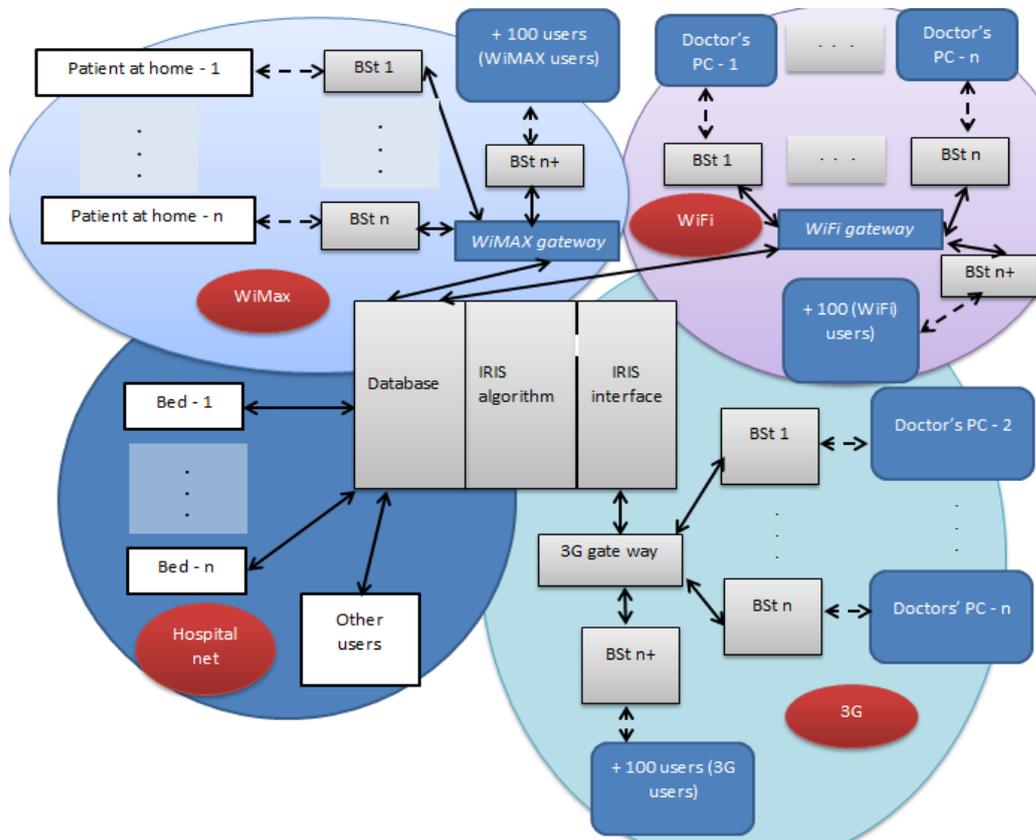


Figure 1: Diagram of Wireless IRIS network

Figure 1 demonstrates that the system allows for a wide degree of flexibility, supporting various wireless broadband communications standards; for example WiFi, WiMAX, 3G, LTE. We also describe the sensory component of the overall system and present results from modelling various sensory throughputs and combinations. Figure 2 illustrates the performance characteristics of the developed system for a particular case of WiMAX broadband access system.

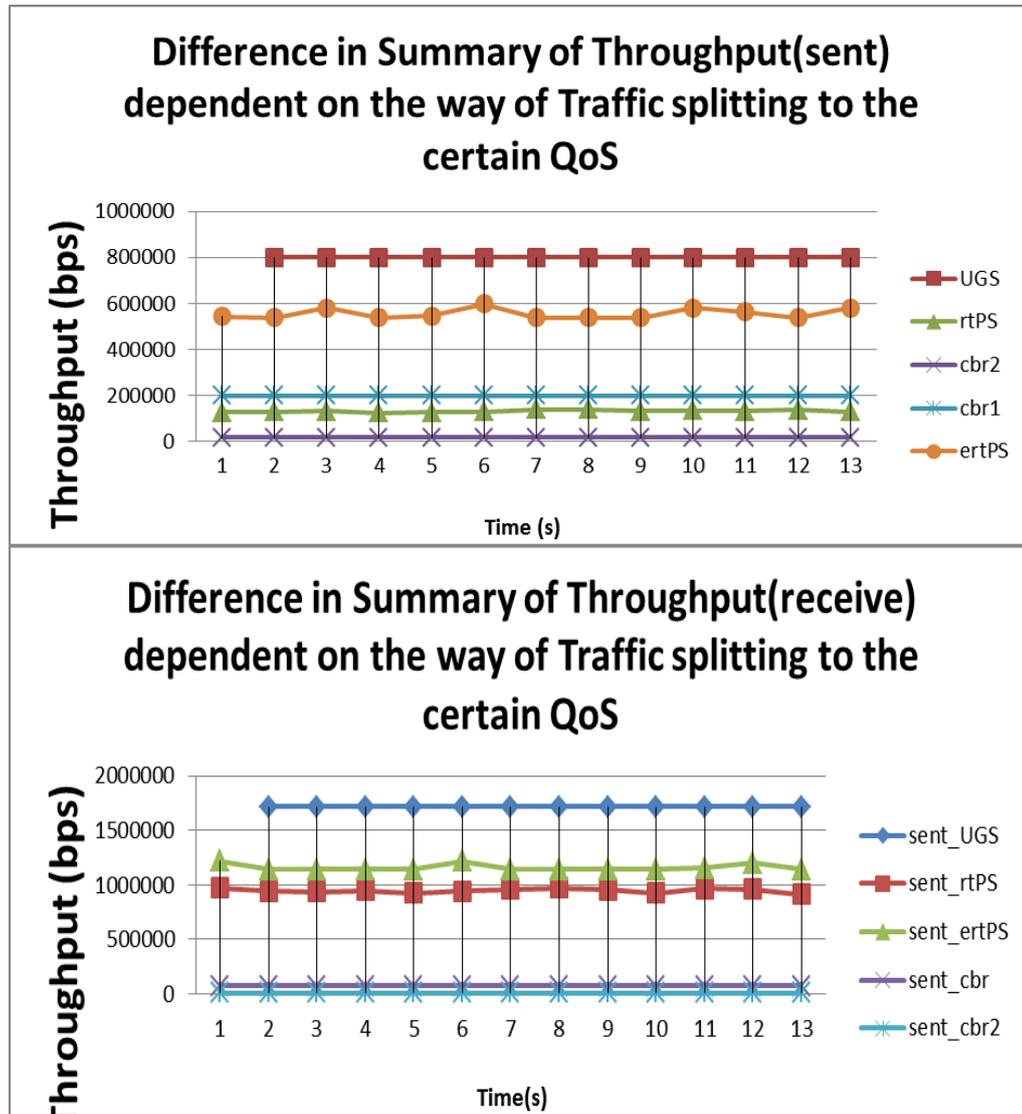


Figure 2: Difference in summary of throughput dependent on the way of traffic splitting to the certain QoS (Quality of service)

To conclude the paper we present a comprehensive set of simulation results, supported by in-depth analysis of the overall system performance and recommendations for integration with the existing hospital information technology infrastructure.