

## **RCSI Bahrain Publications 2014 with abstracts**

**Sandhu DPS. Motivation and its Relevance for Doctors and the Learning Society. The Physician October 2014; 3 (1): 8 - 10**

**Sandhu DPS. Medical Education – Creating a Curriculum for Future Doctors. BMJ Careers. June 2014**

**Fuitze Tan, Asrin Tengah, Lo Yah Nee, Salim Fredericks. A study of the effect of relaxing music on heart rate recovery after exercise among healthy students, Complementary Therapies in Clinical Practice (2014), <http://dx.doi.org/10.1016/j.ctcp.2014.01.001>**

### **Abstract**

Background: Music has been employed in various clinical settings to reduce anxiety. However, metaanalysis has shown music to have little influence on haemodynamic parameters. This study aimed at investigating the effect of relaxing music on heart rate recovery after exercise. Method: Twenty-three student volunteers underwent treadmill exercise and were assessed for heart rate recovery and saliva analysis; comparing exposure to sedative music with exposure to silence during the recovery period immediately following exercise. Results: No differences were found between music and non-music exposure regarding: heart rate recovery, resting pulse rate, and salivary cortisol. Music was no different to silence in affecting these physiological measures, which are all associated with anxiety. Conclusions: Relaxing music unaccompanied by meditation techniques or other such interventions may not have a major role in reducing anxiety in certain experimental settings.

**Donnellan C, Al Banna M, Ghuloom N, Al Sheroqi I, Al-Jishi A, Bakhiet M, Taha S, Walsh P, Whitford D, Abdulla F. , Predictors of vascular cognitive impairment post stroke in a Bahraini cohort: A case-control proposed comparison, International Journal of Stroke, World Stroke Congress, Istanbul, 22 October , 9, 2014, pp321-Published Abstract, 2014**

Introduction: Post stroke dementia and cognitive impairment are associated with poor long-term outcomes, including survival and disability after stroke. The contribution of genetic factors such as the presence of ApoE  $\epsilon$ 4 allele and its association with cognitive impairment post stroke remains inconclusive particularly in Middle-Eastern regions.

Aims: The aim of the study is to examine the correlates and potential predictors of cognitive impairment including biomarkers in stroke patients and compare these functions to healthy older adults in Bahrain.

Methods: A prospective stroke sample of n=200 patients (case group) and n=100 healthy ageing individuals (control group) will be recruited from the largest Medical Complex in Bahrain. A neuropsychological battery of cognitive assessments (global, executive and meta-cognition) will be conducted on all participants and categorized into four sub-groups (non-vascular cognitive impairment, vascular cognitive impairment with no dementia, vascular dementia and mixed dementia) using the DSM-IV dementia criteria, Hachinski Ischaemic Score (HIS) and the Informant Questionnaire on Cognitive Decline in the Elderly (IQCODE). Biomarkers will include ApoE, sRAGE, NEP, BACE1, biochemistry and haematology measurements.

Results: The primary study outcome is to determine early risk factors for cognitive impairment after stroke in a Bahraini cohort. The study has received full ethical approval from the Bahrain Ministry of Health and from the affiliated university.

Conclusions: With increasing stroke incidence rates in Bahrain, this research study will provide useful biological and epidemiological data for future development and planning of health policies and guidelines for stroke care within the Gulf region.

**Donnellan C, REsources And Life Strategy Management (REALISM) trial: Protocol for a stroke rehabilitation intervention using a goal setting and attainment framework, *International Journal of Stroke, World Stroke Congress, Istanbul, 22nd October , 9, 2014, pp211*-Published Abstract, 2014**

Introduction: Some key considerations for a stroke rehabilitation intervention framework should accommodate for life management changes, alterations to self-regulation and acknowledge losses that individuals experience post stroke. One such framework that may be considered for use with a rehabilitative orientation is the Baltes and Baltes Model of Selective Optimization with Compensation (SOC). A proposed intervention called REsources And Life Strategy Management (REALISM) was developed based on the SOC Model.

Aims: The proposed aim is to determine if the REALISM intervention improves outcome post stroke in comparison to standard care.

Methods: The intervention REALISM will involve providing patients with a training programme on managing short- and long-term effects at 4 weeks, 3 and 6 months post stroke using a goal setting and attainment care plan based on the adaptive strategies selection, optimization and compensation. The intervention study will be a single-blinded randomised control trial where the control group will receive standard care and the intervention group the REALISM training programme.

Results: Primary outcomes will determine improvements in metacognition measured by the Meta-cognition Questionnaire 30, self-regulation measured by the Self-regulatory Interview and executive function using the Trial Making Test (A+B). Secondary outcomes will include functional ability, health-related quality of life and mood.

Conclusions: Findings from this intervention study will establish if the use of the REALISM training programme for stroke patients and their carers? in using life management strategies will improve self-care, wellbeing and transferability of care, aiding discharge planning from acute to community settings.

**Donnellan C, O'Neill D, The Baltes' SOC model of successful ageing as a potential framework for stroke rehabilitation, *Disability and Rehabilitation*, 36, (5), 2014, p424-429.**

Abstract

Aim: The aim of this paper is to explore approaches used to address some stroke rehabilitation interventions and to examine the potential use of one of the life-span theories called the Baltes' model of selective optimisation with compensation (SOC) as a potential framework.

Key findings and implications: Some of the key considerations for a stroke rehabilitation intervention framework are highlighted including accommodating for the life management changes post stroke, alterations in self-regulation, acknowledge losses and focusing on a person-centred approach for transition from acute rehabilitation to the home or community setting. The Baltes' SOC model is then described in terms of these considerations for a stroke rehabilitation intervention framework.

Conclusions and recommendations: The Baltes' SOC model may offer further insights, including ageing considerations, for stroke rehabilitation approaches and interventions. It has potential to facilitate some of the necessary complexities of adjustment required in stroke rehabilitation. However, further development in terms of empirical support is required for using the model as a framework to structure stroke rehabilitation intervention. Implications for Rehabilitation There is a scarcity of theoretical frameworks that can facilitate and be inclusive for all the necessary complexities of adjustment, required in stroke rehabilitation. In addition to motor recovery post stroke, rehabilitation intervention frameworks should be goal orientated; address self-regulatory processes; be person-centred and use a common language for goal planning, setting and attainment. The Baltes' SOC model is one such framework that may address some of the considerations for stroke rehabilitation, including motor recovery and other life management aspects.

**Al Banna M, Ghuloom N, Donnellan C, Abdulla F , Metacognitive function post-stroke: A review of definition and assessment, International Journal of Stroke, World Stroke Congress, Istanbul, 22nd-25th October, 9, 2014, pp211**

Introduction: Metacognition is generally defined as the knowledge individuals have about their own cognitive abilities and the regulation of these activities through the use of processes to coordinate cognition. Many authors have defined and used the concepts metacognition and executive function interchangeably, resulting in these concepts not clearly differentiated and lacking clarity regarding their shared and unique characteristics.

Aims: The aim of this review was to identify the definitions and assessment tools used to examine the concept metacognition in stroke studies.

Methods: A computer database search was conducted using PubMed, CINAHL, PsychINFO and the Cochrane Library. Search terms included those relevant to the assessment of metacognition following stroke. We assessed all studies retrieved against specific inclusion criteria, excluded executive function and collated only those studies that emphasized subjective assessment of metacognitive function in stroke patients.

Results: A total of 647 publications were retrieved from the initial database search and n=16 articles remained eligible after inclusion criteria applied. Twelve studies were cross-sectional descriptive studies and n=3 were intervention and/or case studies where metacognition was referred to mainly as awareness of deficits. Only one author (n=3 articles) defined metacognition similar to its generic context within the neuropsychological literature. Assessment tools also varied greatly including assessment of meta-memory, self-awareness deficits, cognitive complaints and self-regulation skills.

Conclusions: Although, there have been a number of recent reviews conducted on executive functioning and awareness deficits, there still remains to be poor clarification and differentiation of these cognitive functions from a conceptual and methodological perspective.

**Hayes S, Donnellan C, Stokes E, Executive dysfunction post-stroke: an insight into the perspectives of physiotherapists, Disability and Rehabilitation, Epub ahead of print, (Nov 6-18), 2014.**

Abstract

Purpose: To gain an understanding of physiotherapy practice in relation to executive dysfunction (ED) post-stroke.

Method: Three focus groups were conducted using semi-structured interview schedules to highlight how ED post-stroke was understood by 12 physiotherapists with greater than 1 year of experience working in the area of stroke care. The focus group data were analysed using qualitative data analysis.

Results: The themes extracted from the data on physiotherapists' self-reported knowledge of ED post-stroke were: physiotherapists' lack of knowledge of ED post-stroke; current physiotherapy practice regarding ED post-stroke; the negative impact of ED on physiotherapy rehabilitation post-stroke and the future learning needs of physiotherapists regarding ED post-stroke.

Conclusions: Current results demonstrate that ED has negative implications for physiotherapy rehabilitation post-stroke. Although further interdisciplinary research is warranted, the present results suggest that physiotherapists should be aware of the presence of ED in people post-stroke and develop strategies to minimise the impact of ED on physiotherapy rehabilitation. Implications for Rehabilitation Physiotherapists report a lack of knowledge of ED post-stroke and a requirement for future learning and training regarding the optimal management of people with ED undergoing physiotherapy rehabilitation post-stroke. ED has negative implications for physiotherapy rehabilitation post-stroke and physiotherapists should be aware of the presence of ED in people post-stroke and develop strategies to minimise the impact of ED on physiotherapy rehabilitation.

**Fiza Rashid-Doubell • Timothy Doubell • Robin o sullivan • Khalifa Elmusharaf. To Click or Not to Click : Introducing Audience Response System during Undergraduate Teaching to Improve Academic Performance. Dec 2014 • Bahrain Medical Bulletin**

Objective: To determine if the use of audience response system (ARS) during large group teaching to undergraduate medical students promotes active learning, improves retention of information and leads to an improvement in academic performance.

Design: A Prospective Interventional Study. Setting: RCSI Bahrain.

Method: ARS was used during a 12-week teaching period in the first semester of the first year of the medical program from October 2012 to December 2012. Lecturers integrated Multiple Choice Questions (MCQs) into their PowerPoint presentations together with ARS during Anatomy and Physiology lectures. Students were asked to discuss and respond to the MCQs during the lectures. Result: Using ARS did not improve academic performance in Anatomy and Physiology, but students reported that using clickers during lectures provided a more interactive learning environment increasing student engagement, promoted active-learning and helped students identify gaps in knowledge.

Conclusion: Using ARS in large group teaching had no impact on academic performance in the Anatomy and Physiology rich modules. However, students overwhelmingly enjoyed using clickers during lectures as they promoted active learning and helped them identify gaps in their knowledge.

**Khalifa Elmusharaf • Elaine Byrne • Diarmuid O ' Donovan. Participatory Health System Research (PHSR): A Novel Strategy of Multilevel Capacity Development for People-Centred Health Systems in South Sudan. Conference Paper • Oct 2014**

## ABSTRACT

**Background:** The ability to participate is usually assumed in participatory research. But there is often the need to develop this capacity to participate in a genuine dialogue and to enable actors to engage in action towards people-centred health systems.

**Methods:** Fourteen women from Renk County in South Sudan were engaged in Participatory Ethnographic Evaluation Research (PEER) to develop their capacity to design research instruments, conduct interviews, collect narratives and stories, and analyse data to identify, prioritize and address their maternal health concerns. Within a year, 10 of them were able to lead work on 'Innovative Participatory Health Education (IPHE)' with NGOs employees and theatrical band members. They developed action messages, created health education materials, and delivered them to their community in the form of pictograms, songs, and drama. Parallel to PEER, 10 senior officers in Ministry of Health were engaged in capacity development workshop on Reproductive Health Project Management (RHPM). They used the maternal health issues generated by PEER to develop project proposals on reproductive health. At the end, the local people and senior officers came together to discuss maternal health issues, where senior officers presented their proposals to the community members who gave them feedback and comments.

### Results:

Women believed that PEER enhanced their credibility- when they returned to their social circles people were more accepting of what they said. They are more confident about their ability to influence change. Senior officers acknowledged that the process helped them to identify maternal health issues through the eyes of the community and that this knowledge will influence their future decision making.

**Conclusion:** PHSR developed capacities at multilevel, empowered communities with research capabilities, engaged them in identifying and addressing their own health concerns, facilitated knowledge brokering, engage health system actors in identifying and acting on opportunities for people-centered health system strengthening.

**Fiza Rashid-Doubell • Robin O'Sullivan • Tim Doubell • Khalifa Elmusharaf. Building student ownership into formative feedback results in improved learning behaviour amongst first year undergraduate medical students. Conference Paper · Sep 2014**

**Background:** A key feature of formative assessment is the feedback generated for students to guide them in improving their performance. Effective feedback should empower the students to become independent learners. Part of the process should include dialogue between student and teacher. The aim of our study was to determine the effect of delivering formative feedback through one-to-one discussions with students. They were questioned on their study behaviour, with the aim of students developing ownership of their learning and improving their performance. **Summary of Work:** Three formative assessments were staggered throughout the first semester to assist students in determining their academic progress. Students who were deemed to under-perform in the first formative met for feedback with academic or support staff. Those repeating the year completed a questionnaire based around time management and study skills to form the basis of the initial discussion. The other students

were questioned more specifically about their study behaviour with the aim of raising awareness, reflection and developing ownership. Summary of Results: Having more than one formative assessment allowed us to measure the impact of our intervention on the performance of students throughout the semester. Following the first assessment, we found there was a significant correlation between ownership of learning and student performance in subsequent formative assessments. Discussion and Conclusions: Ownership of learning during formative feedback improved learning behaviour and led to improved student performance. Take-home messages: Feedback focused on empowering the student was fundamental in developing successful learning behaviour and improved academic performance.

**Khalifa Elmusharaf • Habab Mekki • Amal Abbas • Amal Khalil • Fawzi Victor • Ashraf Khalid • Mustafa Morgan • Sani Njobdi. Assessment of the impact of UHT milk on school children: A study among children in three primary schools in Khartoum State –Sudan· Aug 2014.**

#### Abstract

**Objectives:** To assess the impact of non-fortified UHT school milk project on nutritional status, cognitive development (IQ), general health-related quality of life, and hemoglobin level among school children.

**Methodology:** An evaluation study was designed to recruit pupils from three primary schools in Khartoum State who are in their fourth grade or below who receive 1 packet of non-fortified UHT milk every working day during breakfast time for six months as part of school milk programme. 889 pupils were enrolled at baseline and 775 of them were followed up for the period of six month (October, 2011 – March, 2012). The following anthropometric indicators were measured and calculated: thinness (BMI z score), stunting (height for age), underweight (weight for age), and wasting (weight for height). IQ of the pupils was measured using Goodenough’s Draw-A-Man test. To get the IQ the following formula was used:  $(\text{Mental Age}/\text{Actual age}) * 100$ . Finally interpretations of the IQ results were done using the Stanford-Binet Intelligence Scale. A questionnaire was designed to measure health related quality of life using a likert scale of 5 ranging from “never” to “always” and question were deliberately made to ask in reference to current experience or experience within the last two weeks. Blood samples were collected and analysed for Hemoglobin level. . Children (aged 5 – 11 years) were considered anaemic if Hb level <11.5 g/dL (WHO, 2011)

**Results:** Nutritional status of children has improved significantly in the schools across all indicators. Thinness, stunting, underweight and wasting improved significantly by 32%, 55%, 40% and 17% respectively ( $P < 0.05$ ). Cognitive abilities of the school children improved significantly. On the overall, the mean IQ score improved from 91.4 to 111.5 giving a mean difference of 19.1 (95% CI: 20.7 to 17.5,  $p < 0.05$ ). Health related quality of life measured on a likert scale of 5 improved significantly from mean score of 87 to mean score of 93.2 (mean difference 6.2 score 95%CI: 4.6 to 7.8,  $P < 0.05$ ). There was generally no significant improvement in anemia status among the school children, which has the overall percentage reduction of 8% ( $P > 0.05$ ).

Conclusion: The non-fortified UHT milk has significantly improved nutritional status, and reduced the prevalence of thinness, stunting, underweight and wasting among the children within six months. The non-fortified UHT milk has significantly improved cognitive abilities and health related quality of life of the school children. Although there was slight reduction in number of anaemic children, but it was only a marginal reduction, which was not statistically significant. The non-fortified UHT milk is able to improve nutritional status and intelligence of the children with high prevalence of malnourishment, then let alone children with good nourishment. This a good reason to recommend the scale up the UHT school milk programmes.

**Catherine M. Abou-Zaid. Action research for change: Implementation of 'case based learning' to the undergraduate nursing students: A qualitative study. Journal of Nursing Education and Practice, 2014, Vol. 4, No. 12. DOI: 10.5430/jnep.v4n12p105**

Abstract

Background: Within the faculty of nursing in RCSI–Bahrain our aim is to deliver the information and knowledge in the best possible evidence based practice delivery system known to us. This should be based on up to date evidence and research. Within my own university the delivery systems are varied. We need to bring the entire faculty together to change the habits of old. In order to do this we as educators need to be able to introduce new innovation by planning a change process and by using a good simple change model to help in the process. Introducing the change will need to be done by the collaboration of transformational leadership along with other appropriate leadership styles.

Methods: The qualitative design methodology was used with focus groups as the data collection process. Thematic analysis was used to break down the data collected. Themes were analyzed and recommendations for the change to case based learning as a means of knowledge and information delivery. The sample population in the research study will be from the author's own university. The cohorts of students are from Nursing Year 2 and 3. They were been chosen from a cohort of 224 undergraduate nursing students. Seven students were chosen by random selection from answering an email sent by the researcher, the first 7 students to answer the email were chosen for the focus group interviews.

Results: Looking at the present delivery systems it was now understood that they preferred case-based learning over traditional lectures. More interaction keeps the students interested and active in class. Smaller groups will be proposed for the next semester as the recommendations from both faculty and students were that the groups were too large. Consistency in faculty delivering the information and knowledge needs to be investigated further. Students who initially are unhappy with case-based sessions have warmed to the idea of changes being made.

Conclusion: The students need to be more involved in their learning and this can be done by using case-based studies as a start to the process of student involvement. The case based study sessions are part of the learning process and are being used by the third year undergraduate students in most of the medical-surgical module sessions. Our aim is now to introduce other undergraduate students in nursing

year 1 & 2 to the case based activity sessions. Because this is an action research change project we have to look at the participants that will also be part of the action process.

**Fiza Rashid-Doubell • Timothy Doubell • Robin o sullivan • Khalifa Elmusharaf. To Click or Not to Click: Introducing Audience Response System during Undergraduate Teaching to Improve Academic Performance. December 2014 • Bahrain Medical Bulletin 12/2014; 36(4):232-234. DOI:10.12816/0008131**

Objective: To determine if the use of audience response system (ARS) during large group teaching to undergraduate medical students promotes active learning, improves retention of information and leads to an improvement in academic performance. Design: A Prospective Interventional Study. Setting: RCSI Bahrain. Method: ARS was used during a 12-week teaching period in the first semester of the first year of the medical program from October 2012 to December 2012. Lecturers integrated Multiple Choice Questions (MCQs) into their PowerPoint presentations together with ARS during Anatomy and Physiology lectures. Students were asked to discuss and respond to the MCQs during the lectures. Result: Using ARS did not improve academic performance in Anatomy and Physiology, but students reported that using clickers during lectures provided a more interactive learning environment increasing student engagement, promoted active-learning and helped students identify gaps in knowledge. Conclusion: Using ARS in large group teaching had no impact on academic performance in the Anatomy and Physiology rich modules. However, students overwhelmingly enjoyed using clickers during lectures as they promoted active learning and helped them identify gaps in their knowledge.

**Dr David Misselbrook**

**An A-Z of medical philosophy: X is for Existentialism: Kierkegaard, Heidegger and Sartre. [British Journal of General Practice](#) 64(629):642 • December 2014 DOI: 10.3399/bjgp14x682969**

**Misselbrook, D. (2014). Is honesty the best policy? Why trustworthiness is no easy answer. [The British Journal of General Practice](#), 64(628), 558–559. <http://doi.org/10.3399/bjgp14X682129>**

**Fiza Rashid-Doubell, Robin O'Sullivan, Tim Doubell, Khalifa Elmusharaf. Building student ownership into formative feedback results in improved learning behaviour amongst first year undergraduate medical students. September 2014 • The Association for Medical Education in Europe AMEE Conference 2014: Excellence in Education, Milan, Italy; 09/2014. DOI: 10.13140/RG.2.1.3081.1923**

Abstract

Background: A key feature of formative assessment is the feedback generated for students to guide them in improving their performance. Effective feedback should empower the students to become independent learners. Part of the process should include dialogue between student and teacher. The aim of our study was to determine the effect of delivering formative feedback through one-to-one discussions with students. They were questioned on their study behaviour, with the aim of students developing ownership of their learning and improving their performance.

Summary of Work: Three formative assessments were staggered throughout the first semester to assist students in determining their academic progress. Students who were deemed to under-perform in the first formative met for feedback with academic or support staff. Those repeating the year completed a questionnaire based around time management and study skills to form the basis of the initial discussion.



The other students were questioned more specifically about their study behaviour with the aim of raising awareness, reflection and developing ownership.

Summary of Results: Having more than one formative assessment allowed us to measure the impact of our intervention on the performance of students throughout the semester. Following the first assessment, we found there was a significant correlation between ownership of learning and student performance in subsequent formative assessments.

Discussion and Conclusions: Ownership of learning during formative feedback improved learning behaviour and led to improved student performance. Take-home messages: Feedback focused on empowering the student was fundamental in developing successful learning behaviour and improved academic performance.

**Meshkat B, Cowman S, Gethin G, Ryan K, Wiley M, Brick B, Clarke E, Mulligan E. (2014) Using an e-Delphi technique in achieving consensus across disciplines for developing best practice in day surgery in Ireland. Journal of Hospital Administration, 2014, 3 (4) 1- 8. DOI: 10.5430/jha.v3n4p1.**

Abstract Background: The benefits of day surgery are supported internationally by the provision of standards. However, standards from one health jurisdiction are not readily transferable to others as national health strategy, policy and funding are influencing factors. Objective: To determine, through consensus from experts in day surgery, a list of best practice statements for day surgery in Ireland. Methods: A three round e-Delphi technique. Professionals in surgery, anaesthesia, nursing and management involved in day surgery across all hospitals in Ireland were invited to participate as the expert panel. In round 1 a list of proposals for best practice were obtained from panel members. In round 2 experts were asked to rank each statement according to their importance on a nine point scale (1 = not important, 9 = high importance) using an online questionnaire. Consensus was set at 70%, meaning the items that 70% of people deemed to be important were carried over to round 3. A repeat online questionnaire was conducted with the remaining statements in round 3. Results: Round 1 provided 261 statements. These were grouped and reduced to 62 statements for ranking. Following the iterative process over the subsequent two rounds a final list of 40 statements were developed and grouped into six thematic areas. Conclusion: By using an e-Delphi process of gaining consensus among experts working in day surgical services, a list of best practice statements were developed.

**Moore Z, Cowman S. Risk Assessment for the Prevention of Pressure Ulcers. Cochrane Database of Systematic Reviews 2014, DOI: 10.1002/14651858.CD006471.pub3**

Background: Use of pressure ulcer risk assessment tools or scales is a component of the assessment process used to identify individuals at risk of developing a pressure ulcer. Indeed, use of a risk assessment tool is recommended by many international pressure ulcer prevention guidelines, however it is not known whether using a risk assessment tool makes a difference to patient outcomes. We conducted a review to provide a summary of the evidence pertaining to pressure ulcer risk assessment in clinical practice.

Objectives: To determine whether using structured, systematic pressure ulcer risk assessment tools, in any health care setting, reduces the incidence of pressure ulcers.

Search strategy: In December 2013, for this second update, we searched the Cochrane Wounds Group Specialised Register; The Cochrane Central Register of Controlled Trials (CENTRAL) (*The Cochrane Library*); Ovid MEDLINE; Ovid EMBASE; and EBSCO CINAHL.

Selection criteria: Randomised controlled trials (RCTs) comparing the use of structured, systematic, pressure ulcer risk assessment tools with no structured pressure ulcer risk assessment, or with unaided clinical judgement, or RCTs comparing the use of different structured pressure ulcer risk assessment tools.

Data collection and analysis: Two review authors independently assessed titles and abstracts of the studies identified by the search strategy for eligibility, obtained full versions of potentially relevant studies and screened these against the inclusion criteria.

Main results: We included two studies in this review. One small, cluster randomised study found no statistical difference in pressure ulcer incidence in patients who were assessed by nurses using the Braden risk assessment tool (n=74) compared with patients assessed by nurses who had received training and then used unstructured risk assessment (n=76) (RR 0.97, 95% CI 0.53 to 1.77) and those patients assessed by nurses using unstructured risk assessment alone (n=106) (RR 1.43, 95% CI 0.77 to 2.68). The second study was a large single blind randomised controlled study which compared the effect of risk assessment on pressure ulcer incidence using the Waterlow risk assessment tool (n=411), the Ramstadius risk screening tool (n=420) and no formal risk assessment (n=420). There was no statistical difference in pressure ulcer incidence between the three groups (Waterlow 7.5% (n=31); Ramstadius 5.4% (n=22); clinical judgement 6.8% (n=28) (RR 1.10, 95% CI 0.68 to 1.81; Waterlow vs no formal risk assessment), (RR 0.79, 95% CI 0.46 to 1.35; Ramstadius vs no formal risk assessment), (RR 1.44, 95% CI 0.85 to 2.44; Waterlow vs Ramstadius).

**Seamus Cowman. Middle Eastern Nursing Perspective from Bahrain· Jul 2014 · Journal of Advanced Nursing. (Editorial)**

**Denieffe S, Cowman S, Gooney M. Symptoms, clusters and quality of life prior to surgery for breast cancer. J Clin Nurs 2014;23(17-18):2491-2502.**

Abstract

Aims and objectives: To examine the pretreatment symptoms and symptom clusters that women awaiting breast cancer surgery are experiencing and the impact of these symptoms on their quality of life.

Background: Most women diagnosed with breast cancer will have surgery as a first-line treatment. The presence of presurgery symptoms may be significant in contributing to distress and impaired quality of life. While it seems that women with breast cancer may experience the symptoms of fatigue, pain, depression and sleep disturbance as a cluster, this has not yet been confirmed by empirical research in the presurgery time period.

Design: A multiple-point prospective longitudinal cohort panel design is used.

Methods: Presurgery symptoms and quality of life were assessed using the Hospital Anxiety and Depression Scale, Insomnia Severity Index, Functional Assessment of Cancer Therapy-Fatigue, Brief Pain Inventory and the European Organization for Research and Treatment of Cancer Quality of Life Questionnaire Core 30(3).

Results: Participants (n = 94, age range 30-92) experienced symptoms prior to surgery, with pain being a more prevalent symptom (35%) than fatigue (32%), sleep disturbances (25.5%) or depression (11%). global quality of life was significantly impacted on by fatigue and showed a moderate correlation with emotional functioning and a weak correlation with physical and social functioning. Hierarchical cluster analysis identified the presence of five clusters with symptoms present in differing intensities in each cluster.

Conclusion: In this cohort of women, healthy other than having a diagnosis of breast cancer, symptoms were impacting on quality of life. It is evident that clusters of symptoms are present pre-surgery that must be assessed and managed.

Relevance to practice: Healthcare delivery systems must ensure that early symptoms are addressed effectively in the pre-surgery period to improve quality of life and reduce adverse outcomes post - surgery.

**Cowman S. Commentary on Forensic and non-forensic psychiatric nursing skills and competencies for psychopathic and personality disordered patients. Bowen, M and Mason T (2012) Journal of Clinical Nursing doi: 10.1111/j.1365-2702.2011.03970.x.**

**Robin O'Sullivan, Fiza Rashid-Doubell, Tim Doubell, Khalifa Elmusharaf. Building student ownership into formative feedback results in improved learning behaviour amongst first year undergraduate medical students. September 2014 • The Association for Medical Education in Europe AMEE Conference 2014: Excellence in Education, Milan, Italy; 09/2014. DOI: 10.13140/RG.2.1.3081.1923**

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Background: A key feature of formative assessment is the feedback generated for students to guide them in improving their performance. Effective feedback should empower the students to become independent learners. Part of the process should include dialogue between student and teacher. The aim of our study was to determine the effect of delivering formative feedback through one-to-one discussions with students. They were questioned on their study behaviour, with the aim of students developing ownership of their learning and improving their performance.

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Discussion and Conclusions: Ownership of learning during formative feedback improved learning behaviour and led to improved student performance. Take-home messages: Feedback focused on empowering the student was fundamental in developing successful learning behaviour and improved academic performance.

**McDonald C, Sanz S, Brechin EK, Singh MK, Rajaraman G, Gaynor D, et al. High nuclearity Ni(II) cages from hydroxamate ligands. RSC Adv 2014;4(72):38182-38191.**

Abstract:

The synthesis, structural and magnetic characterisation of a family of Ni(II) cages built from hydroxamate ligands is presented. Two pentanuclear 12-MCNi(II)-4 metallacrowns [Ni<sub>5</sub>(L1)<sub>4</sub>(MeOH)<sub>4</sub>](ClO<sub>4</sub>)<sub>2</sub>·2MeOH (1) and [Ni<sub>5</sub>(L1)<sub>4</sub>(py)<sub>5</sub>](ClO<sub>4</sub>)<sub>2</sub>·H<sub>2</sub>O (2) (where L1H<sub>2</sub> = 2-(dimethylamino)phenylhydroxamic acid) share analogous, near-planar {Ni<sub>5</sub>(L1)<sub>4</sub>}<sup>2+</sup> cores, but differ in the number and nature of the ligands located at the axial Ni(II) sites; the addition of pyridine converting square planar Ni(II) ions to square-based pyramidal and octahedral Ni(II) ions, introducing extra paramagnetic metal centres which 'switch on' additional magnetic superexchange pathways. Subtle variations in the reaction scheme used to produce complexes 1 and 2 result in both a change of topology and an increase in nuclearity, through isolation of the hepta- and nonametallacrowns [Ni<sub>7</sub>(L1H)<sub>8</sub>(L1)<sub>2</sub>(H<sub>2</sub>O)<sub>6</sub>](SO<sub>4</sub>)·15H<sub>2</sub>O (3), [Ni<sub>9</sub>(μ-H<sub>2</sub>O)<sub>2</sub>(L2)<sub>6</sub>(L2H)<sub>4</sub>(H<sub>2</sub>O)<sub>2</sub>](SO<sub>4</sub>)·29H<sub>2</sub>O (4) and [Ni<sub>9</sub>(μ-H<sub>2</sub>O)<sub>2</sub>(L2)<sub>6</sub>(L2H)<sub>4</sub>(H<sub>2</sub>O)<sub>2</sub>](ClO<sub>4</sub>)<sub>2</sub>·2MeOH·18H<sub>2</sub>O (5) (where L2H<sub>2</sub> = 2-(amino)phenylhydroxamic acid). Complementary dc magnetic susceptibility studies and DFT analysis indicate dominant antiferromagnetic exchange interactions in 1, 2, 4 and 5, but competing ferro- and antiferromagnetic exchange in 3.

**Borgan SM, Jassim G, Marhoon ZA, Almuqamam MA, Ebrahim MA, Soliman PA. Prevalence of tobacco smoking among health-care physicians in Bahrain. BMC Public Health 2014;14(1).**

Abstract

Background: There is a clear shift in smoking habits among the Middle Eastern population with a recent and alarming increase in the prevalence of waterpipe (shisha) smoking. This phenomenon has not yet been studied sufficiently across the physician population. Therefore, we set out to establish the smoking status of primary healthcare physicians in the kingdom of Bahrain.

Methods: A self-administered questionnaire was distributed to a random sample of 175 out of the total 320 primary care physicians. Descriptive analysis was performed on all data and associations between variables were tested using Fishers Exact t test with statistical significance set as P-value < 0.05.

Results: One hundred and fifty two physicians agreed to participate in the study. Sixty seven percent of physicians were females and the mean (SD) age was 45 (10) years. The majority of the physicians were married (93%) and of Bahraini nationality (76%). Ever-smokers were 11% of the population while current smokers corresponded to 8.6%. Waterpipe was the most common method of tobacco smoking followed by cigarettes. Among male physicians, the prevalence of current 'waterpipe only' smokers was 12%, followed by 4% and 2% corresponding to 'cigarette only' smokers and both, respectively. There were only three female smokers in the population, two 'waterpipe only' smokers and one cigar smoker. Of

those who smoked waterpipe (n = 9; 6%), 33% smoked daily, 44% smoked weekly and 22% smoked at least once a month. Current smoking status was associated with male gender (P < 0.001) and showed a male to female smoking ratio of (10:1).

Conclusion: Waterpipe smoking rates exceeded cigarette smoking among the population of physicians in Bahrain. Prevalence of smoking remains unacceptably high among male physicians. Assessment of physicians' knowledge of the harmful effects of waterpipe tobacco smoking is warranted to plan future interventions.

**Jassim GA, Whitford DL. Understanding the experiences and quality of life issues of Bahraini women with breast cancer. Soc Sci Med 2014;107:189-195.**

Abstract

We explored the experiences of Bahraini women who have survived breast cancer and their perception of quality of life after diagnosis. We conducted in depth, semi-structured face-to-face interviews with twelve women diagnosed with breast cancer. A qualitative method using semi-structured interviews on a purposive sample of 12 Bahraini women with breast cancer was conducted. Similarities and differences in women's experience were identified through thematic analysis of interview transcripts using a constant comparative approach. The themes identified were meaning of cancer and quality of life, spirituality and beliefs about causes of breast cancer, coping mechanisms, impact of illness and change in relationships. Quality of life was framed in terms of the ability to perform daily duties with emphasis on the physical component of quality of life. Themes that differed from previous western studies included a heavy emphasis on spiritual practices for comfort; the use of traditional clothing (hijab and abaya) to hide hair and body changes; the important role played by the family and husband in treatment decisions and concerns regarding satisfying the sexual needs of the husband, which were related to a fear of losing the husband to a second wife. Evil eye, stress and God's punishment were believed to be fundamental causes of the disease. The emotional shock of the initial diagnosis, concerns about whether to reveal the diagnosis and a desire to live a normal life were consistent with previous studies. However, cultural and religious issues such as role of the husband and impact of prayers were also important here. These themes are important to healthcare professionals for ensuring an individualized approach to the treatment of women with breast cancer.

**Hejab AH, Jassim GA. The pattern of unplanned returns to emergency department. Bahrain Med Bull 2014;36(1).**

Abstract

Background: Unplanned returns are considered as one of the quality indicators of Emergency Department services. Studying characteristics of these unplanned returns may help to improve the services delivered by Emergency Department. Objective: To determine the rate of unplanned returns to Emergency Department, the most common complaint, the diagnosis and the consistency of diagnosis on the second visit compared to the initial visit. Setting: Emergency Department, BDF hospital, Bahrain. Design: Descriptive cross-sectional study. Method: One hundred and fifty-five participants were chosen at random from patients visiting the Emergency Department within 72 hours of their initial visit over 3 months period. Personal characteristics of the participants, the triage details of the first and second visits, most common complaints and diagnoses were reviewed. Result: Six hundred ninety-one (4.6%)

patients had unplanned returns within 72 hours of total visits to the Emergency Department. Three (1.9%) patients were admitted on the first visit and 40 (25.8%) upon the second visit. The most common complaints to revisit the Emergency Department were abdominal pain, 46 (29.7%) and chest pain and shortness of breath (SOB), 30 (19.4%). The most common diagnoses were gastrointestinal conditions, chest conditions and trauma 35 (22.6%), 27 (17.4%) and 19 (12.3%) respectively. The majority of complaints and diagnoses 122 (78.7%) were consistent in the two visits. Conclusion: Unplanned returns to the Emergency Department constitute a fair proportion of total visits. Considering the characteristics of unplanned returns, it is important if specific Emergency Department populations are targeted in order to decrease unplanned returns.

**Hayes, A. Al-Gallaf, A. (2014). Monitoring Students' Engagement with an Online Course: Reflections and Implications for Practice. In Bacon, L. (Ed) Innovations in Technology Enhanced Learning, GSTF in collaboration with Cambridge Scholars Publishing.**

**A.A. Dakhel • S. Cassidy • Khalil E. Jasim • F. Z. Henari. Synthesis and characterisation of curcumin–M (M = B, Fe and Cu) films grown on p-Si substrate for dielectric applications. Nov 2014 · Microelectronics Reliability, 55(2). doi:10.1016/j.microrel.2014.11.008.**

Abstract

Metal-coordinated yellow curcumin was extracted from green natural sources and sublimated in vacuum to prepare thin films on p-Si and glass substrates for dielectric and optical investigations. The synthesised curcumin complexed with the metals boron, iron, and copper powders were crystalline while the prepared films were amorphous. The optical absorption spectrum of the prepared films showed similar two absorption band structure in the visible range. The onset energy of the main optical absorption band of the film was determined using the Tauc technique. The dielectric properties of this material were systematically studied for future applications in metal–insulator–semiconductor MIS field of applications. The complex dielectric properties were studied in the frequency range of 1–1000 kHz and was analysed. The important find is a large optoelectronic sensitivity so that the integral optical responsivity ( $S^*$ ) reaches  $\sim 1.0$  A/W and the electrical conductivity increases under light illumination by  $\sim 400$ – $1000\%$ . Generally, Curcumin metal complex can be used in small- $k$  environmentally friendly production of microelectronic and optoelectronic devices.

**Saleh LM, Hassan HA, Henari FZ, Patil PS, Bannur MS. Nonlinear refractive and optical limiting measurements of 2-thienylchalcone derivatives under cw laser regime. Appl Phys A 2014;116(2):805-810.**

Abstract

The nonlinear refractive index of 2-thienylchalcone derivatives in solution was investigated using z-scan technique with a continuous wave Argon ion laser. The results show that 2-thienylchalcone derivatives exhibit a large nonlinear refractive index at 488 nm. The optical limiting behaviour based on nonlinear refractive index was also investigated. The fluorescence from the samples was recorded and the relationship between the variation of nonlinear refractive index values and optical limiting values with fluorescence intensity were investigated. The results indicated that 2-thienylchalcone derivatives could be promising candidates for application on nonlinear photonic devices.

**Whitford DL, Hubail AR. Cultural sensitivity or professional acculturation in early clinical experience? Med Teach 2014;36(11):951-957.**

Abstract

**Aim:** This study aimed to explore the early clinical experience of medical students following the adaptation of an Early Patient Contact curriculum from a European culture in Ireland to an Arab culture in Bahrain.

**Methods:** Medical students in Bahrain took part in an Early Patient Contact module modelled on a similar module from a partner medical school in Ireland. We used a qualitative approach employing thematic analysis of 54 student reflective logbooks. Particular attention was placed on reflections of cultural influences of experience in the course.

**Results:** Medical students undergoing this module received reported documented benefits of early clinical experience. However, students in Bahrain were exposed to cultural norms of the local Arab society including gender values, visiting the homes of strangers, language barriers and generous hospitality that led to additional challenges and learning for the medical students in acculturating to norms of the medical profession.

**Conclusion:** Modules intended for curriculum adaptation between two cultures would be best served by a group of "core" learning outcomes with "secondary" outcomes culturally appropriate to each site. Within the context of the Arab culture, early clinical experience has the added benefit of allowing students to learn about both local and professional cultural norms, thereby facilitating integration of these two cultures.

**Jassim GA, Whitford DL. Understanding the experiences and quality of life issues of Bahraini women with breast cancer. Soc Sci Med 2014;107:189-195.**

Abstract

We explored the experiences of Bahraini women who have survived breast cancer and their perception of quality of life after diagnosis. We conducted in depth, semi-structured face-to-face interviews with twelve women diagnosed with breast cancer. A qualitative method using semi-structured interviews on a purposive sample of 12 Bahraini women with breast cancer was conducted. Similarities and differences in women's experience were identified through thematic analysis of interview transcripts using a constant comparative approach. The themes identified were meaning of cancer and quality of life, spirituality and beliefs about causes of breast cancer, coping mechanisms, impact of illness and change in relationships. Quality of life was framed in terms of the ability to perform daily duties with emphasis on the physical component of quality of life. Themes that differed from previous western studies included a heavy emphasis on spiritual practices for comfort; the use of traditional clothing (hijab and abaya) to hide hair and body changes; the important role played by the family and husband in treatment decisions and concerns regarding satisfying the sexual needs of the husband, which were related to a fear of losing the husband to a second wife. Evil eye, stress and God's punishment were believed to be fundamental causes of the disease. The emotional shock of the initial diagnosis, concerns about whether to reveal the diagnosis and a desire to live a normal life were consistent with previous studies. However, cultural and religious issues such as role of the husband and impact of prayers were

also important here. These themes are important to healthcare professionals for ensuring an individualized approach to the treatment of women with breast cancer.

**Whitford DL, Al-Anjawi HA, Al-Baharna MM. Impact of clinical inertia on cardiovascular risk factors in patients with diabetes. Prim Care Diabetes 2014;8(2):133-138.**

Abstract

**Aims:** To determine whether clinical inertia is associated with simpler interventions occurring more often than complex changes and the association between clinical inertia and outcomes.

**Methods:** Prevalence of clinical inertia over a 30 month period for hyperglycaemia, hypertension and dyslipidaemia was calculated in a random sample (n=334) of patients attending a diabetes clinic. Comparisons between prevalence of clinical inertia and outcomes for each condition were examined using parametric tests of association.

**Results:** There was less clinical inertia in hyperglycaemia (29% of consultations) compared with LDL (80% of consultations) and systolic BP (68% of consultations). Consultations where therapy was intensified had a greater reduction in risk factor levels than when no change was made. No association was found between treatment intensity scores and changes in HbA1c, LDL or blood pressure over 30 months.

**Conclusions:** Physicians are no more likely to intervene in conditions where simple therapeutic changes are necessary as opposed to complex changes. Greater clinical inertia leads to poorer outcomes. There continues to be substantial clinical inertia in routine clinical practice. Physicians should adopt a holistic approach to cardiovascular risk reduction in patients with diabetes, adhere more closely to established management guidelines and emphasize personal individualized target setting.

**Hayes, A. Al-Gallaf, A. (2014). Monitoring Students' Engagement with an Online Course: Reflections and Implications for Practice. In Bacon, L. (Ed) Innovations in Technology Enhanced Learning, GSTF in collaboration with Cambridge Scholars Publishing.**

**Hayes, A. Al-Amri, N.M. (2014) Strategic Use of English to Study Science: A Perspective from Communities of Practice. ISRN Education. Volume 2014, Article ID 728153, DOI://dx.doi.org/10.1155/2014/72815**

Abstract

This research is underpinned by the sociocultural perspective of communities of practice which situates learning and students' use of strategic actions to achieve the desired goals in the practices of their communities. Strategic use of the English language is the focus of this study and the aim of this research was to establish whether differences in the strategic use of writing skills in English exist between students of various educational backgrounds. A self-reporting questionnaire on the writing strategy use was distributed among 94 students enrolled in the Foundation Year in one university. The questionnaire items were classified into subgroups, including cognitive, metacognitive, social, affective, compensation, memory, and negative strategies. The results showed that no differences exist among students in all groups in terms of the overall strategy use and in each questionnaire subgroup. Data was analysed using the Mann-Whitney U test and the Kruskal-Wallis one-way analysis of variance. All results were statistically insignificant. The findings from this study have implications for the theory of communities of



practice, suggesting that sources of student choices regarding the use of English skills to study science might be related more to their individual agency rather than specific communities of practice.