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جامعة السلطان قابوس، مسقط، 4-6 فبراير 2018

Oral Presentations

Professionalism through Reflection: *A mixed-methods study*

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Objectives: Reflective practice can help nursing students to become professional nurses. This study was conducted to understand the formation of professional identity through reflective practice from the point of view of Bachelor of Science in Nursing (BSN) students at a nursing college in Kerala, India. **Methods:** A mixed-methods sequential explanatory design was used. In the quantitative phase, the experimental group were taught about reflective practice and maintained weekly reflective journals for 14 weeks. Clinical performance was then evaluated for both the experimental and control groups. In the second phase, focus group interviews were conducted to gain insight into the students' experiences. **Results:** There was significant improvement in the performance of selected clinical competencies in the experimental group ($P < 0.05$). This was supported by the focus group interviews and themes generated during content analysis. **Conclusion:** Reflective practice can be implemented to help BSN students to develop their identities as professional nurses.

Students' Perception of the Educational Environment in Saudi Arabia

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Objectives: The educational environment influences learning and the behaviour of learners and is a manifestation of the curriculum. The provision and assessment of a quality learning environment is one of the responsibilities of an educational institution and may form part of their continuous quality improvement initiatives. **Methods:** This cross-sectional descriptive study was undertaken in the Assir region of Saudi Arabia. A total of 384 students in medical, nursing, dental and allied health sciences undergraduate programmes were recruited using stratified random sampling. Their perceptions of the educational environment were assessed using the Dundee Ready Education Environment Measure. **Results:** The mean scores of the participants were analysed, with additional data collection in progress. **Conclusion:** This presentation highlights learners' perceptions of the educational environment within Saudi Arabia in light of similar studies. Such data may provide useful information on the strengths and limitations of the current educational atmosphere in Saudi Arabia.

Development and Validation of an Emotional Reaction Scale for Stroke Survivors

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Objectives: This study aimed to develop and validate a new emotional reaction scale for stroke survivors using a mixed-methods approach. **Methods:** In-depth interviews with stroke survivors, nurses, spouses and doctors and focus group discussions with three caregiver groups were conducted to identify the emotional outcome domains. The items were reviewed by experts and the 30-item tool was tested on a sample of 75 participants. Content validity, convergent validity with the Hospital Anxiety and Depression Scale and construct validity using factor analysis were then examined. **Results:** The identified domains were anger, hostility, paranoia, inferiority, anxiety and depression. The total number of items was reduced to 15 after review. Cronbach's α values for test-retest reliability, inter-observer reliability and internal consistency were >0.80 . A principal component analysis yielded a factor loading of >0.35 and a total variance of $>60\%$. The tool demonstrated satisfactory convergent validity ($P < 0.001$). **Conclusion:** The final tool had 12 items.

Mothers' Satisfaction with Postpartum Care Based on the Bruce Model at Urban Health Centres in Mashhad, Iran

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Objectives: This study aimed to investigate mothers' satisfaction with postpartum care at urban health centres in Mashhad, Iran, in 2013. **Methods:** A total of 500 individuals who were receiving postpartum care for the second or third time at 19 health centres in Mashhad were recruited using a multistage sampling technique. A questionnaire to assess their satisfaction with postpartum care was

developed based on the Bruce model. **Results:** The mean satisfaction score was $198/60 \pm 27/43$, indicating that the participants were very or fairly satisfied with their postpartum care. The highest satisfaction scores were noted in the aspects of education and counselling and the lowest was in the aspect of follow-up care. There was a significant relationship between demographic variables and satisfaction scores ($P < 0.05$). **Conclusion:** Investigating maternal satisfaction with postpartum care is an important step towards improving the overall quality of healthcare services.

Effectiveness of the “Predict, Explain, Observe, Explain” Model in Academic Achievement and the Development of Creative Thinking Skills Among General Nursing Diploma Students in Oman

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Objectives: This study aimed to investigate the effectiveness of the “Predict, Explain, Observe, Explain” (PEOE) model in terms of academic achievement and the development of creative thinking skills among general nursing diploma students. **Methods:** The study involved a pre-post design and two classes of second-year students ($n = 45$) at the Oman Nursing Institute, Muscat, Oman. Each class was randomly assigned to either the experimental group in which students were taught according to the PEOE model ($n = 22$) or the control group in which students were taught using traditional methods ($n = 23$). Outcomes were measured using the Academic Achievement Test and the verbal Torrance Test of Creative Thinking Form A. **Results:** There was a significant difference in academic achievement and creative thinking skills between the two groups, in favour of the experimental group ($P = 0.05$). **Conclusion:** Use of the PEOE model is recommended when teaching different nursing courses.

Home-Delivered Education in Cancer Pain Management

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Objectives: This study aimed to determine the influence of home-delivered education on the pain management knowledge and self-efficacy of family caregivers (FCGs) of adult cancer patients (ACPs) in Uganda. **Methods:** A one-group pre-post-test design was used. The study included 54 FCGs with low knowledge and self-efficacy who had provided pain management assistance to ACPs for at least one month. An at-home intervention was delivered, consisting of two 45–60 minute one-on-one educational sessions using a booklet, as well as follow-up visits by peer-support volunteers at 4, 8 and 12 weeks. Knowledge and self-efficacy were measured using the Family Pain Questionnaire and Caregiver Pain Management Self-Efficacy Scale, respectively. **Results:** The pre- and post-intervention mean scores yielded significant differences in knowledge and self-efficacy scores ($P < 0.001$ each). **Conclusion:** The home-based educational and peer support intervention significantly increased the FCGs' knowledge and self-efficacy regarding ACP pain management.

Impact of an Innovative Versus Traditional Approach to Teaching Paediatric Clinical Practicum to Male Nursing Students at the Oman Nursing Institute: *Randomised controlled study*

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Objectives: This study aimed to assess the impact of an innovative approach to teaching a paediatric nursing clinical *practicum*. **Methods:** Available third-year male general diploma nursing students ($n = 19$) were randomly assigned to either the control group ($n = 10$) or experimental group ($n = 9$). Students in the experimental group underwent their *practicum* in innovative care settings (i.e. health centres, schools, emergency/outpatient departments, paediatric intensive care units, etc.), while those in the control group had theirs in traditional settings (i.e. general paediatric wards). Each student then completed a validated semi-structured questionnaire. **Results:** The control group less frequently reported providing care confidently in the general wards (33% versus 56%). Furthermore, 89% of students in the experimental group agreed that innovative paediatric settings increased their confidence as future paediatric nurses. **Conclusion:** Partnerships with healthcare teams and community members may provide opportunities for male nursing students to undergo more innovative childcare *practica*.

Development and Validation of a Cross-Cultural Adjustment Tool for Overseas Filipino Nurses in the Middle East

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Objectives: This study aimed to develop a tool to measure the cross-cultural adjustment of overseas Filipino nurses based in the Middle East. **Methods:** This sequential exploratory mixed-methods study collected qualitative data first, followed by quantitative data. Using Colaizzi's descriptive phenomenology method, three themes were identified: the preparation process, coping strategies and the changes and challenges faced by overseas Filipino nurses. Subsequently, the instrument was developed in four phases: item generation and scale construction; validity testing; piloting; and evaluation of psychometric properties. **Results:** A 68-item tool was developed. The scale-level content-validity index was 0.88 and the Cronbach's α value was 0.936. An exploratory factor analysis using the varimax rotation method set at 0.30 with Kaiser normalisation resulted in a three-factor structure: (1) cross-cultural sensitivity and encounters, (2) cross-cultural knowledge and (3) support and cross-cultural challenges. **Conclusion:** Cross-cultural adjustment can be reliably measured using the developed tool.

The Effectiveness of an Innovative Teaching Method on Family Health Assessment Among Bachelor Nursing Students in Selected Nursing Colleges

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Objectives: Alternative/innovative teaching methods such as computer-aided instruction, problem-based learning and programmed instruction allow students to grow through their experiences. This study aimed to evaluate the effectiveness of an innovative teaching method among Bachelor of Science students in selected nursing colleges. **Methods:** A quasi-experimental nonequivalent experimental and control group design was used. The sample consisted of 193 second-year nursing students selected by purposive sampling. A questionnaire was used to collect the data. The experimental and control groups were taught using team-based learning and lecture methods, respectively. **Results:** According to the pre-test results, 7.3% of the experimental group had poor knowledge compared to 10.3% of the control group. The post-test mean knowledge scores of the experimental and control groups increased from 57.6% to 62.8% and 58% to 59%, respectively. The mean difference between the groups was statistically significant ($t = 3.988$; $P < 0.001$). **Conclusion:** Team-based learning is an effective method of teaching family health assessment.

The Effect of an Educational Intervention on Self-Efficacy and Adherence to Healthy Behaviours Among Women with Gestational Diabetes

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Objectives: This study aimed to evaluate the effect of an educational intervention on self-efficacy and adherence to healthy behaviours among women with gestational diabetes mellitus (GDM). **Methods:** This study involved a two-group pre-post comparative experimental design. A random sampling technique was used to recruit 90 participants who were randomised to a control or intervention group. The control group ($n = 45$) received standard prenatal care while the intervention group ($n = 45$) received an additional health education session and biweekly text messages for four weeks. Different strategies were used to encourage women to maintain recommended healthy behaviours. **Results:** There was a significant improvement in the post-test self-efficacy scores of the intervention group compared to the control group ($t_{(88)} = -2.99$; $P < 0.001$). However, improved self-efficacy was not a significant predictor for improved adherence to healthy behaviours ($B = 0.01$; $SE = 0.01$; $P = 0.08$). **Conclusion:** The intervention significantly improved self-efficacy scores among women with GDM.

Reflective Journaling: An innovative strategy beyond clinical learning

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Objectives: Reflective journaling is a strategy which can be used by the students to voice their views on a day-to-day basis during their clinical placement. This study aimed to explore the perceptions of nursing students on reflective journaling as a strategy beyond clinical learning. **Methods:** A pilot study using a descriptive survey approach was conducted among 40 mental health nursing students at a nursing college in India. The unstructured written feedback of the students at the end of their clinical experience was then used to explore their perceptions of reflective journaling. **Results:** On the whole, the students perceived that reflective journals enhanced their personal, professional and clinical learning. **Conclusion:** The results of this study reinforce the notion that journaling is an effective method of teaching and learning in nursing education.

Predictive Modelling of Risk Factors for Clinical Deterioration Among Adult Inpatients in Acute Care Settings in Oman

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Objectives: The identification of factors which contribute to patient risk during hospitalisation can help in the prevention of clinical deterioration. This study aimed to identify risk factors associated with clinical deterioration and build a predictive model. **Methods:** This retrospective case-control study analysed 1,000 adult patients managed by critical care outreach teams (CCOTs) at two tertiary hospitals between February 2016 and February 2017. A similar number of adult patients admitted during the same period who did not require CCOT management constituted the control group. Descriptive, univariable and multivariable regression analyses were conducted to identify predictors for CCOT management. **Results:** Approximately 49% of cases necessitating CCOT management could be predicted by a combination of variables; of these, gender, admitting diagnosis, access to healthcare and Modified Early Warning Score (MEWS) were significant predictors ($P \leq 0.006$ each). **Conclusion:** Gender, admitting diagnosis, access to healthcare and MEWS are significant predictors for CCOT management and clinical deterioration during hospitalisation.

Physicians' and Nurses' Awareness and Perception of Patients' Rights within Ministry of Health Institutions in Oman

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Objectives: In Oman, healthcare is considered a fundamental right and is delivered free-of-charge to the local population. This study aimed to determine awareness of and adherence to patients' rights among physicians and nurses. **Methods:** A cross-sectional survey was conducted using a self-reported questionnaire. Nurses ($n = 685$) and physicians ($n = 528$) working at 23 Ministry of Health institutions were recruited by proportional stratified random sampling. **Results:** The majority (87%) were aware of the importance of patients' rights; however, there was low adherence (63.81%) in actual practice. Nationality ($P = 0.0021$), role ($P = 0.0244$) and institutional level ($P = 0.0338$) were significantly associated with awareness of and adherence to patients' rights. **Conclusion:** Awareness of the importance of patients' rights is high among nurses and physicians in Oman; however, greater adherence to these rights should be promoted. Non-Omani staff more often perceived and adhered to patients' rights in comparison to Omani staff.

A Cross-Country Comparative Study on Evidence-Based Practice Competence Among Student Nurses

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Objectives: This study aimed to compare evidence-based practice (EBP) competence among student nurses in four countries to examine barriers to EBP implementation. **Methods:** A descriptive cross-sectional comparative design was used. Convenience samples (n = 1,383) were recruited from India, Saudi Arabia, Nigeria and Oman. Data were collected using the Evidence-Based Practice Competence Questionnaire (EBP-COQ) and the Barriers Scale between January 2016 and August 2017. **Results:** Nursing students from all four countries reported moderate-to-high EBP competence; however, significant differences were noted between countries in terms of mean EBP-COQ subscale scores (i.e. knowledge, skills and attitudes). Identified barriers to EBP implementation included: having no authority to change patient care policies; delayed publication of evidence; and lack of time in clinical settings to implement evidence. **Conclusion:** These findings emphasise the need for multifaceted and culturally-tailored approaches to teaching EBP to nursing students in order to enhance EBP competence and, ultimately, patient care.

Impact of an Innovative and Collaborative Structured Teaching Programme for Cardiac Patients on Knowledge of Lifestyle Modifications to Maintain a Healthy Heart: A quasi-experimental study at the Royal Hospital, Muscat, Oman

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Objectives: Cardiovascular diseases (CVDs) account for 33% of all noncommunicable diseases in Oman. This study aimed to compare pre- and post-test knowledge scores regarding lifestyle modifications (LSMs) for maintaining a healthy heart among cardiac patients following the administration of a structured teaching programme (STP). **Methods:** A total of 70 patients from an intermediate cardiac care unit were selected by non-probability purposive sampling. The patients participated in a structured interview and took part in an interactive individualised STP. **Results:** Prior to the STP, the majority of participants lacked high levels of knowledge pertaining to LSMs. The mean pre- and post-test knowledge scores were 50.5% and 76.5%, respectively, with an increase of 26.1%. This difference was statistically significant (t = 18.65; P < 0.05). **Conclusion:** An STP implemented by advanced practice nurses can aid in the prevention of modifiable risk factors of CVD progression.

Effect of Cognitive Behavioural Therapy on Diet Adherence Among Individuals Undergoing Haemodialysis

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Objectives: Chronic renal failure patients often display poor adherence to dietary regimens, thus leading to increased mortality. This study aimed to determine the effect of cognitive behavioural therapy (CBT) on diet adherence among haemodialysis patients. **Methods:** This randomised controlled trial involved 33 patients in the experimental group and 34 patients in the control group. All participants were selected via computerised block randomisation from a tertiary care hospital in South Karnataka, India. A diet adherence scale and dietary guide were developed in collaboration with nephrologists, dialysis technicians and dietetics and nutrition experts. Each member of the experimental and control groups underwent 10 sessions of either CBT or non-directed counselling, respectively. **Results:** Diet adherence as a result of CBT in the experimental group (from 138.45 at baseline to 198.82 at three months and 199.64 at six months) was greater than that of the control group (F = 1.464; P = 0.001). **Conclusion:** CBT seems to be a cost-effective intervention in promoting diet adherence among individuals undergoing haemodialysis.

Nursing Quality Clinical Rounds: The road towards continuous quality improvement

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Objectives: This study aimed to explore the effectiveness of nursing quality clinical rounds by comparing the rate of compliance with quality standards between 2016 and 2017. **Methods:** A prospective comparative study was conducted in inpatient areas at Sultan Qaboos University Hospital (SQUH), Muscat, Oman. An objective tool was developed based on the required organisational practices of Accreditation Canada International and SQUH policies. The tool consisted of 10 key clinical and administrative areas. Data were collected during visits to different SQUH units by two senior nurses. A total of 21 inpatient wards/units were involved in the study. **Results:** There was significant improvement in certain indicators, including adherence to the call bell and patient fall and pressure ulcer prevention standards. **Conclusion:** These findings indicate that implementing nursing quality clinical rounds improves staff compliance to quality standards. Such initiatives can be adopted by clinical nursing staff to take ownership in improving compliance to such standards.

Work-Related Stress and Psychosomatic Complaints Among Omani Nurses

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Objectives: Stress contributes to health problems among nurses and decreases efficiency. This study aimed to examine work-related stress and psychosomatic complaints among Omani nurses. **Methods:** A descriptive correlational design and non-proportionate quota sampling was used to recruit 100 Omani nurses from Rustaq Hospital, Rustaq, Oman. Data were collected using a self-administered

questionnaire adapted from the Nursing Stress Scale. **Results:** Most respondents were female (73%), 26–30 years old (38%), diploma holders (72%) and had 5–10 years' nursing experience (42%). Respondents reported moderate stress levels (mean score: 2.98). Nurses who were ≤25 years, female, diploma holders, had <5 years' work experience and who were working in intensive/special care units had higher stress levels. The most common psychosomatic complaints were headaches (83%), back/spine pain (81%), fatigue (69%), tiredness (62%) and difficulty sleeping (61%). **Conclusion:** Healthcare institutions should encourage therapeutic communication, professional mentoring and supportive work environments to help nurses cope with work-related stress.

Emergency Triage Nurse-Led Application of the Ottawa Ankle Rules: *Effect on pain and satisfaction with emergency care at selected hospitals in Oman*

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Objectives: This study aimed to examine the effectiveness of the application of the Ottawa Ankle Rules by emergency triage nurses in improving pain upon discharge and satisfaction with care among ankle injury patients. **Methods:** A quasi-experimental design was used to collect data from 96 adult patients presenting to the emergency department with acute ankle injury. The intervention group (n = 46) received nurse-led triage assessment and radiographical tests as per the Ottawa Ankle Rules while the nonequivalent control group (n = 50) received usual care. **Results:** There was no significant difference in pain upon discharge (t = 1.74; P = 0.86) between the control and intervention groups. However, there was a significant difference in terms of satisfaction with care (t = 5.60; P < 0.01). **Conclusion:** Implementing the Ottawa Ankle Rules had no effect on pain but significantly increased satisfaction with emergency care among ankle injury patients.

Patients' and Nurses' Perceptions of Post-Coronary Artery Bypass Graft Learning Needs in Two Cardiac Centres in Oman

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Objectives: In Oman, education regarding self-care after a coronary artery bypass graft (CABG) may be given to the patient by nurses. This study aimed to examine differences between patients' and nurses' perceptions of the learning needs of post-CABG patients. **Methods:** A cross-sectional descriptive design was used. A sample of nurses and patients with CABG (n = 180) were recruited from two tertiary hospitals in Muscat, Oman. Data were collected using the Cardiac Patients Learning Needs Inventory questionnaire. **Results:** Patients reported needing more education regarding the cardiac unit, chest and leg wound care and complications (mean scores: 14.7 ± 1.72, 14.7 ± 1.72 and 14.4 ± 1.3, respectively). Nurses perceived that information related to chest and leg wound care, the cardiac unit and complications (mean scores: 14.6 ± 0.96, 14.3 ± 1.17 and 14.3 ± 1.36, respectively) were the most important learning needs. **Conclusion:** This study emphasises the significance of assessing post-CABG patients' learning needs and the role of nurses in fulfilling these learning needs prior to discharge.

Compliance with Integrated Management of Childhood Illness Standards: A comparative study

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Objectives: This study aimed to compare compliance with the World Health Organization's Integrated Management of Childhood Illness (IMCI) standards at health centres in two regions of Oman. **Methods:** A cross-sectional comparative design was used and data were collected from five health centres. Caregiver compliance with IMCI standards was assessed in terms of medical professionals' advice, the correct prescription of oral antibiotics and cough syrup in non-emergency cases, standard health practices and the availability of essential medical supplies at the healthcare centres. **Results:** The number of follow-up visits were reduced by 15% at IMCI-compliant healthcare centres. Furthermore, there was a 20% reduction in the unnecessary prescription of both oral antibiotics and cough syrup at IMCI-compliant healthcare centres. Finally, there was a 90% improvement in standard healthcare practices at IMCI-compliant health centres. **Conclusion:** The IMCI-compliant healthcare centres demonstrated superior healthcare practices compared to non-IMCI-compliant centres.

Simulation to Improve Caregivers' Home Safety Practices

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Objectives: Paediatric injuries are among the least recognised public health issues in the world. This study aimed to evaluate the effectiveness of simulation in improving caregivers' home safety practices. **Methods:** The study took place in 30 out of 108 villages in an Indian taluk district, of which 15 villages constituted the experimental group and 15 the control group. A sample of 300 caregivers from these villages were randomly selected. Face validity was taken into account and the simulation environment was finalised for use in the study. Interventions were conducted in each village separately. Home safety practices were assessed using a home safety practice scale. **Results:** There was a statistically significant difference in observed home safety practices for falls ($F_{(3,447)} = 262.24$; $P = 0.001$; $\eta^2 = 0.638$). **Conclusion:** The results proved that simulation is an effective intervention in improving caregivers' home safety practices and reducing paediatric injuries.

Outcomes of Simulation Among Novice Nursing Students

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Objectives: Simulation provides a positive learning environment and guarantees patient safety during clinical teaching. This study was conducted to evaluate students' satisfaction and self-confidence after simulation and to assess the effect of an intervention on their competency with nasogastric tube feeding. **Methods:** This quasi-experimental study included a sample of 69 students, of which 35 received an intervention with simulation and 34 constituted the control group and were taught using case scenarios. **Results:** There was a positive statistically significance difference in the satisfaction and self-confidence scores of students in the intervention group ($P = 0.002$). However, there was a significant improvement in the mean competency scores of both groups, indicating that both simulation and teaching using case scenarios were effective in improving student competency with nasogastric tube feeding ($P = 0.001$). **Conclusion:** These findings support the use of both simulation and case scenario teaching techniques to improve competency among novice students.

Factors Associated with Nurse Absenteeism in Al-Dakhiliyah Governorate, Oman:

A cross-sectional study

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Objectives: The incidence of absenteeism in Al-Dakhiliyah Governorate, Oman, has gradually increased in recent years. This study aimed to examine factors associated with absenteeism among nurses in Al-Dakhiliyah Governorate. **Methods:** A descriptive cross-sectional design was employed. A stratified random sampling technique was used to recruit Omani and non-Omani nurses working night duty in six hospitals and two primary care centres. All participants were invited to complete a survey. **Results:** A total of 248 nurses completed the questionnaire; of these, most were Omani (61.1%), female (86.6%), married (86.6%) and holders of a nursing diploma (69.4%). Perceived factors leading to absenteeism included a lack of family support, personal health problems, family emergencies and unforeseen circumstances. Enjoying nursing as a profession, institutional support/motivation and appreciation of nurses by patients were reported as factors that could reduce absenteeism. **Conclusion:** These findings can be utilised to modify existing policies pertaining to absenteeism and develop new strategies to prevent nurse absenteeism.

Job Satisfaction Among Staff Nurses in the Eastern Province of Saudi Arabia

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Objectives: This study aimed to identify factors related to job satisfaction among nurses at an acute care hospital in Eastern Saudi Arabia. **Methods:** A descriptive design was used to determine job satisfaction among Saudi-trained and foreign-trained nurses. **Results:** The relationship between job satisfaction and balancing family and work interaction opportunities and professional opportunities was significant. A factor analysis also revealed that motivation, professional development, leadership style and interpersonal relations were important to nurses. Saudi nurses raised an important concern unique to the nature of work in Saudi Arabia as an area for improvement. **Conclusion:** Studying such factors will help identify areas for improvement so as to meet future nurses' satisfaction goals.

Prevalence of Delayed Umbilical Cord Clamping Practices

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Objectives: This study aimed to explore the umbilical cord clamping practices of maternity care providers in Oman. **Methods:** A descriptive survey was undertaken among 175 maternity care providers using questionnaires. **Results:** The respondents reported varied cord clamping practices. Most maternity care providers clamped the cord within one minute of birth (70–72.6%) and defined early cord clamping timing as ≤ 1 minute for both term and preterm newborns (87.4–89.6%). Only 10% and 15% reported delayed cord clamping practices for normally-delivered preterm and term newborns, respectively. The most commonly reported benefits of delayed cord clamping were physiological transitioning, increased iron storage and reduced anaemia, while polycythaemia and jaundice were identified as the greatest risks. **Conclusion:** The low prevalence of delayed cord clamping practices—as recommended by recent evidence and guidelines—necessitates further research. There is a need for clear policies at the national level to promote evidence-based practices related to cord clamping.

Cardiac Learning Needs of Post-Myocardial Infarction Patients in Oman

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Objectives: Myocardial infarction (MI) is a common cardiovascular condition; in Oman, the estimated prevalence of MI is 0.0034%. This study aimed to assess cardiac learning needs among post-MI patients in Oman. **Methods:** A descriptive cross-sectional design was used. The learning needs of 180 Omani post-MI patients at the Royal Hospital and Sultan Qaboos University Hospital, Muscat, Oman, were assessed using the Arabic Cardiac Learning Needs Inventory. **Results:** The majority had high cardiac learning needs (70%). The average total learning need score was 177.4 ± 20.1 . The greatest learning needs were in the medication (81.1%), diet (78.9%), anatomy/physiology (76.6%), risk factors (76.1%) and psychological factors (72.7%) categories. There were significant differences in physical activity learning needs according to gender ($P = 0.015$) and income level ($P < 0.001$), as well as in physical activity learning needs ($P < 0.001$) and total cardiac learning needs ($P = 0.017$) according to marital status. **Conclusion:** Post-MI patients have critical learning needs related to disease management and prevention.

Effectiveness of Implementing the Emergency Severity Index Triage System in a Secondary Healthcare Centre in Oman

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Objectives: This study aimed to assess the effectiveness of the Emergency Severity Index (ESI) triage system at a secondary healthcare centre in Oman in terms of waiting time, length of stay (LOS), patient satisfaction and patient safety. **Methods:** A pre-post quasi-experimental design was used. Convenience samples of 187 patients before and 102 patients after implementing the ESI system were included. Data were collected from electronic medical records and using the Brief Emergency Department Patient Satisfaction Scale. **Results:** Following implementation, mean time from registration to triage ($P = 0.002$) and LOS ($P = 0.65$) were reduced, while patient satisfaction score increased ($P = 0.64$). Regarding triage level decisions, inter-rater agreement showed improved accuracy ($P < 0.001$) compared to pre-implementation ($P = 0.005$). **Conclusion:** Although the results from the current study are from a single setting, they demonstrate that the ESI system can decrease waiting time and LOS and increase patient satisfaction in the emergency department.

Exploring Nursing Students' Learning Outcomes from Clinical Experiences

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Objectives: Clinical education forms a core component of nursing practice. However, the gap between theory and practice is a global problem. This study aimed to explore the perceptions of Omani students regarding their clinical learning outcomes. **Methods:** A convenience sample of 37 fourth- and fifth-year students from Sultan Qaboos University, Muscat, Oman, volunteered to participate in the study. Six focus groups of 7–8 students each were held to obtain students' views regarding their clinical learning outcomes. Subsequently, a content analysis of transcribed responses was performed with coding and categorisation as per qualitative data analysis methods. **Results:** Four major themes emerged during the focus group sessions: nursing skills, clinical time, relationships and the alignment of nursing courses in the curriculum. **Conclusion:** This study supports a reform in clinical training so as to develop more innovative and learner-centred approaches.

Male Nursing Students' Perceptions of Child Health Nursing *Practica* at the Oman Nursing Institute: A qualitative study

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Objectives: Clinical *practica* can influence students' perceptions of the nursing profession. This study aimed to assess Omani male nursing students' perceptions of paediatric *practica*. **Methods:** A descriptive phenomenological approach was undertaken to answer the following research questions: (1) what are the perceptions of male nursing students regarding providing paediatric care; (2) what are facilitating factors/barriers to paediatric nursing; and (3) what are innovative approaches that can strengthen such *practica*. Data were gathered during focus group interviews with all third-year male nursing students ($n = 19$) at the Oman Nursing Institute, Muscat, Oman, undergoing child health *practica*. **Results:** A thematic analysis of the discussions yielded the following four themes: perceptions; sociocultural and communication barriers; facilitators of care; and strengthening clinical experience. Students perceived that fear, anxiety and a lack of confidence were barriers, while the need for collaborative support with cultural adaptation was evident. **Conclusion:** Innovative approaches to strengthen clinical placements for Omani male nursing students are necessary.

Poster Presentations

Does Student Self-Evaluation Enhance the Learning Outcomes of Nursing Students?

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Objectives: The aim of this systematic review was to assess the impact of self-evaluation on learning outcomes among nursing students. **Methods:** A systematic literature search was conducted using the MEDLINE® database (National Library of Medicine, Bethesda, Maryland, USA). Articles were initially compared in terms of title or abstract and those relevant to the subject of this review were retrieved in full-text format. A critical appraisal was performed to assess the impact of self-evaluation on learning outcomes among nursing students. **Results:** A total of 12 articles were identified. Many of these demonstrated that self-assessment contributes to mastery goal orientation, higher self-efficacy, greater intrinsic motivation, higher academic performance, improved student behaviour, increased awareness of one's own learning and improved problem-solving skills. **Conclusion:** Student self-assessment appears to be key to reflective practice and a good predictor of learning outcomes.

Predictors of Academic Learning Outcomes Among Diploma Nursing Graduates: Towards programme intervention

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Objectives: This study aims to identify the degree that the learning outcomes of graduated nursing students are associated with non-academic and academic factors as predictors. **Methods:** A correlational prospective design was used and a sample of 161 diploma nursing graduates obtained using consecutive sampling. An analysis was undertaken of the students' academic profile, marks and demographic characteristics. Learning success was measured according to the passing marks of the students at the end of their three-year diploma programme. **Results:** Most of the students were female and resided in rural areas. Overall, the graduating class of 2015

had the lowest success rate (38.5%). There was a correlation between overall grade point average (GPA) and age (Kendall' tau $P = 0.523$). Second-year GPA was a significant predictor of learning success (Spearman's rho $P = 0.534$) among the class of 2013–2015. **Conclusion:** These findings may aid in future nursing programme interventions.

Effectiveness of a Hybrid Problem-Based Learning Method Among Nursing Students at the Oman Nursing Institute

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Objectives: Problem-based learning (PBL) is an increasingly popular teaching technique in nursing education and enhances critical thinking, decision-making, communication and problem-solving skills. This study aimed to determine the effectiveness of a hybrid PBL method and satisfaction among nursing students at the Oman Nursing Institute, Muscat, Oman. **Methods:** A quasi-experimental one-group post-test design was used among second-year ($n = 28$) and third-year ($n = 31$) general nursing diploma students. A hybrid PBL method was used to teach paediatric nursing care for children with different conditions. **Results:** There was a significant improvement in the knowledge scores of both groups. However, the performance of the second-year students was better than that of the third-year students. **Conclusion:** PBL is an innovative and student-friendly method which can effectively improve the academic scores of nursing students.

Problem Identification Web: A novel learning strategy

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Objectives: This review paper aimed to identify a meaningful learning model for novice nursing students. **Methods:** Two research databases—Cumulative Index of Nursing and Allied Health® (EBSCO Information Services, Ipswich, Massachusetts, USA) and ScienceDirect™ (Elsevier, Amsterdam, the Netherlands)—were searched using the following keywords: “meaningful learning”, “nursing process” and “novice nursing students”. All articles published between 2014–2017 were included in the analysis. **Results:** A total of 12 articles were identified. The themes from these articles were used to develop a diagrammatic representation model consisting of five concentric circles, called the problem identification (PI) web. The innermost circle consists of the patient name and medical diagnosis. The second circle portrays the patient's complaints and any abnormal physical examination findings. Abnormal diagnostic characteristics are displayed in the third circle and therapeutic modalities are depicted in the fourth circle. The fifth circle shows the final diagnosis. **Conclusion:** The PI web model may help student nurses to focus on important information to be prioritised during diagnosis.

Teaching the 'Net Generation': An integrative review of barriers to e-learning among nursing faculty

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Objectives: Information technology (IT) continues to transform the nursing education landscape, with e-learning offering opportunities for easily accessible student-centred teaching and learning. However, not all nursing faculty members embrace e-learning. This review aimed to explore barriers to implementing e-learning among nursing faculty. **Methods:** An integrative review and narrative analysis was conducted. The MEDLINE® (National Library of Medicine, Bethesda, Maryland, USA), Embase™ (Elsevier, Amsterdam, the Netherlands), CINAHL® (EBSCO Information Services, Ipswich, Massachusetts, USA), PsycINFO® (American Psychological Association, Washington D.C., USA) and Web of Science™ (Clarivate Analytics, Philadelphia, Pennsylvania, USA) databases were searched for English-language primary research studies published between 2000–2018 focusing on e-learning and related barriers. **Results:** A total of 10 articles were identified with three main themes: use of IT; nurse educator pedagogical issues; and institutional issues. Most studies utilised cross-sectional designs (i.e. weak levels of evidence). **Conclusion:** The integration of e-learning into nursing education is hampered by a number of barriers that require intervention.

Simulation in Psychiatric Nursing: An integrative review

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Objectives: Although the use of simulation in nursing education has been proven to improve students' self-confidence and skill acquisition, simulation remains highly underutilised in psychiatric nursing courses. This review aimed to determine the learning outcomes associated with the use of different simulation techniques in pre- and post-graduate psychiatric nursing courses. **Methods:** Whittemore and Knaff's integrative review method was applied. The keywords “simulation” and “psychiatric nursing” were used to search the CINAHL® (EBSCO Information Services, Ipswich, Massachusetts, USA), PsycINFO® (American Psychological Association, Washington D.C., USA) and MEDLINE® (National Library of Medicine, Bethesda, Maryland, USA) databases. **Results:** A total of 25 articles were identified. The majority of the studies associated simulation with positive educational outcomes and recognised it to be an effective and safe teaching method. However, most studies used convenience sampling techniques which might limit the generalisability of their results. **Conclusion:** The benefits of simulation in psychiatric nursing education requires further investigation.

Development and Validation of Information, Education and Communication Materials for Improving Awareness of Teenage Pregnancy

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Objectives: This study aimed to explore, develop and validate an educational video to improve awareness of and attitudes towards teenage pregnancy among high school students and their mothers in a rural community. **Methods:** This study utilised a quasi-experimental design. A video regarding teenage pregnancy was conceptualised, designed, piloted, evaluated and validated using the

theory of planned behaviour/reasoned action. A total of 180 female students and 96 mothers were recruited and assigned to control and experimental groups. A video, scripted in Tagalog, and entitled “*Dalawang Larawan ni Maria* (Two Faces of Maria)” was shown to the experimental group. **Results:** The post-test scores of students (mean score: -0.90; $t = -6.48$) and mothers (mean score: -1.20; $t = -6.60$; $P < 0.01$) revealed a significant difference in level of awareness between the control and experimental groups. However, there was no significant difference in attitude. **Conclusion:** The video intervention improved awareness of teenage pregnancy among high school students and their mothers.

Beyond the Bedside: *Crisis-driven nursing intervention*

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Objectives: As the largest group of healthcare providers, nurses can contribute to reducing the effects of conflict through policy, research and skill training in different phases of disaster risk reduction and mitigation. This study aimed to document the challenges faced by nurses working in areas where armed incursions may occur. **Methods:** An interpretive phenomenology design was implemented. Focus group discussions were used to explore the experiences of nurses working at conflict evacuation sites and satellite hospitals during the armed Zamboanga siege in 2013. Colaizzi’s analytic method was utilised to determine themes. **Results:** The discussions focused on the nurses’ lack of preparedness to deal with violence, extremism and terrorism. **Conclusion:** These results show a need for nurses to evolve from individual bedside patient carers to healthcare practitioners that can respond and adapt to ever-changing environments and potential disasters.

Barriers to and Facilitators of Research Utilisation Among Nurses

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Objectives: This study aimed to explore nurses’ perception regarding the barriers to and facilitators of research utilisation at an academic hospital in Oman. **Methods:** Data were collected via a descriptive survey using the previously validated Barriers and Facilitator scales. A convenience sample of 60 nurses from different units of the hospital was recruited randomly. **Results:** Most nurses (63%) reported being aware of new research and 56% were willing to change their current practices or try new ideas. However, 45% identified a lack of authority to change patient care procedures to be the main barrier to research utilisation; moreover, 46% were unsure how to identify indicators of research quality, potentially signifying a lack of knowledge of research methodology. **Conclusion:** Despite its small sample size, this study provides important information regarding nurses’ perceptions of research facilitators and barriers.

Kangaroo Care and its Effect on Vital Signs Among Low-Birth-Weight Preterm Babies: *The importance of collaboration between nurses and mothers*

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Objectives: This study was conducted to evaluate the effectiveness of implementing kangaroo maternal care on the vital signs of low-birth-weight preterm babies. **Methods:** An interventional clinical trial was conducted in a neonatal unit using a convenience sample of 20 medically stable infants of 25–35 gestational weeks weighing <1,500 g. All mothers agreed to participate in the study and provide kangaroo care. A standardised checklist was used by nurses to record the infants’ temperatures, oxygen blood saturation and blood pressure before and after attachment. Heart rate and respiratory rate were monitored continuously with neonatal electrodes. **Results:** There was a significant decrease in the infants’ respiratory rate and increase in temperature and oxygen blood saturation following kangaroo care. **Conclusion:** Despite the cultural limitations of this study and the small sample size, the results indicate that kangaroo care results in positive outcomes. However, maternal collaboration is vital during implementation.

Clinical Practices of Nursing Staff in Emergency Departments Regarding Oral and Axilla Body Temperature Measurements: *An observational study*

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Objectives: This study aimed to determine the current clinical practices of staff nurses working in an emergency department (ED) in the measurement of oral and axilla body temperatures. **Methods:** An observational study was conducted using a convenience sample of 60 ED staff nurses. A standardised tool sourced from the Royal Marsden Hospital Manual of Clinical Procedures was utilised to assess the nurses’ practices while checking the body temperature of stable adult patients. **Results:** Overall, 56.96% and 56.66% of nurses failed to explain the procedure to the patients when taking oral and axilla temperatures, respectively. In addition, a large number (63.33%) failed to place the probe in the proper position when taking the patient’s oral temperature. **Conclusion:** These findings indicate that greater emphasis should be placed on standard practices for checking oral and axilla body temperature among nurses.

Proposal for Smart Phone Applications for Nurse Interns to be ‘Smart’ Nurses

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Objectives: This study will aim to develop and evaluate the effectiveness of a smart phone-based application in increasing nursing interns’ knowledge, skills and confidence when providing care. **Methods:** A randomised trial using a pre-post-test design will be conducted among nursing interns at Jalan Bani Bu Ali Hospital and Sur Hospital, South Sharqiyah Governorate, Oman. A PlayWay® smart phone-based application (PlayWay SA, Hornówek, Poland) will be developed using a learning scenario/video and administered to the experimental group, while the control group will receive one-time lecture-based education. The application will focus on Ministry of Health mandatory training courses, including electrocardiography, intravenous therapy and basic life support. **Results:** The

learning outcomes of the nursing interns will be evaluated. Data analyses will be performed using descriptive and inferential statistics. **Conclusion:** Smart phone-based education may be an effective learning method in nursing education to enhance student interest in learning.

Proposal for Integrating Virtual Reality Simulation in the Undergraduate Nursing Curriculum in Oman

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Objectives: Although different types of simulation are widely used in undergraduate nursing curricula worldwide, virtual learning models have not yet been integrated into the undergraduate nursing curriculum in Oman. This study will aim to implement virtual simulation modalities in the undergraduate nursing curriculum in Oman. **Methods:** The project proposes to pilot-test virtual scenarios focusing on medication administration on nursing students at one of the Ministry of Health nursing institutes in Oman. Avatars will be created on the Second Life® three-dimensional virtual reality platform (Linden Lab Inc., San Francisco, California, USA) and will interact with students. In addition, students will also be able to control the avatars themselves. **Results:** Pre- and post-test analyses will be conducted to evaluate the effectiveness of the virtual reality scenario-based learning approach among the nursing students. **Conclusion:** Virtual reality simulation scenarios may prove to enhance students' learning and interest in nursing theory and practical skills.

Quality of Life, Stress and Coping Strategies Among Wives of Alcohol-Dependent Patients Admitted to Selected Hospitals in Udupi District, India

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Objectives: Alcoholism affects both the alcohol-dependent individual and their spouse. This study aimed to determine the quality of life (QOL), stress and coping strategies of the wives of alcohol-dependent individuals. **Methods:** A descriptive design was used to collect data from a tertiary care hospital in Udupi district, India. A sample of 60 women with alcohol-dependent spouses were recruited. The Coping Scale and abbreviated World Health Organization Quality of Life scale were used. **Results:** The majority of the participants reported moderate (60%) or severe (26.67%) stress. There were moderate negative correlations between stress and the physical ($r = -0.524$; $P < 0.001$), psychological ($r = -0.527$; $P < 0.001$), social ($r = -0.460$; $P < 0.001$) and environmental ($r = -0.480$; $P < 0.001$) domains of QOL. **Conclusion:** There is a need for continuous support from families, communities and healthcare professionals towards the spouses of those affected by alcohol abuse.

Benefits of Nonpharmacological Interventions During Labour: A systematic review

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Objectives: A variety of nonpharmacological methods are available to relieve labour pain. The aim of this systematic review was to appraise common nonpharmacological interventions during labour in reducing maternal and neonatal discomfort. **Methods:** A search was conducted in the MEDLINE® (National Library of Medicine, Bethesda, Maryland, USA) and ProQuest® (ProQuest LLC, Ann Arbor, Michigan, USA) databases. Data were extracted from full-text articles by one individual and reviewed by a second individual. A third individual was contacted whenever there was a discrepancy. **Results:** A total of 12 relevant studies were identified, of which 11 were randomised control trials. A variety of nonpharmacological interventions were described, including prenatal yoga, progressive muscle relaxation, acupressure, massage (both perineal and lumbar), warm showers/cold therapy, foot reflexology and use of a birthing ball. **Conclusion:** The use of nonpharmacological interventions during pregnancy or labour can help to enhance maternal wellbeing, thereby reducing maternal and neonatal complications.

Comparative Study on Training and Development at Two Tertiary Hospitals in Muscat, Oman

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Objectives: The aim of this study was to assess and compare nurses' perceptions regarding training and development at two tertiary hospitals in Muscat, Oman. It also sought to identify the methods of training and development used at both hospitals and employee satisfaction. **Methods:** A questionnaire designed to measure three dimensions, including demographic data and training and development opportunities, was utilised. The scale was tested for validity and reliability. **Results:** A total of 185 respondents from both hospitals completed the survey. Nurses in both hospitals responded positively regarding opportunities for development in general. The majority of respondents at each hospital agreed that they have opportunities to improve their knowledge-based competencies. Overall, 92% of respondents from both hospitals agreed that they were equipped with adequate skills to deal with the demands of their workplace. **Conclusion:** There was little difference in the training opportunities provided to Omani and non-Omani nurses.

Adoption of Evidence-Based Practice in Nursing Education: Concept analysis

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In order to provide high-quality nursing care, many countries have adopted the use of evidence-based practice (EBP) in their healthcare systems. However, a lack of resources and essential knowledge for EBP can cause difficulties in adopting EBP in clinical practice. Walker and Avant's method of concept analysis was used to help produce a consistent operational definition so that the EBP concept has

validity in the practice of nursing. This can aid in exploring what is known regarding the adoption of EBP for application in an academic context in nursing education. The attributes, antecedents, consequences and referents for EBP adoption are discussed and a definition of adoption formulated using the attributes of this concept analysis.

The Role of Socratic Questioning in Improving Critical Thinking Skills Among Nursing Students

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Nursing students and educators should understand Socratic pedagogy and its role in facilitating critical and creative thinking skills and clinical reasoning. There are six types of Socratic questions: reflection, induction, deduction, analysis, challenging assumptions and evaluation of data/information to guide decision-making. Nurse educators should move away from emphasising critical thinking and instead focus on thinking in multiple ways. Nurse educators can help students to improve their critical thinking skills using the Socratic questioning method during interactive dialogues. This will help students to identify problems and clarify misconceptions.

Mutualism: A method of clinical teaching

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Registered nurses sometimes study alongside direct-entry students during the completion of their Bachelor of Science in Nursing (BSN) degree. However, teaching mixed groups of students can be challenging. Mutualism involves the voluntary collaboration of two different types of students as part of a mutual learning relationship during the final clinical course of the BSN programme. The two types of students are assigned to the same clinical preceptor, have the same clinical shifts and observe and review each other's clinical competencies. This allows them to overcome challenges in interpersonal communication and differences in age, knowledge and clinical exposure and results in increased knowledge, patient care abilities and independent learning skills.