

UNIVERSITY OF THE
FREE STATE
UNIVERSITEIT VAN DIE
VRYSTAAT
YUNIVESITHI YA
FREISTATA



UFS·UV
HEALTH SCIENCES
GESONDHEIDSWETENSAPPE

STUDENT RESEARCH FORUM

TUESDAY, 22 AUGUST 2017

KINE 1

ADJUDICATORS

Dr Willem Rabie
(Chairperson)
School of Medicine

Ms Ronelle Jansen
School of Nursing

Dr Marlene Opperman
School for Allied Health Professions

Mr Cornel van Rooyen
Department of Biostatistics

PROGRAMME

08:00 - 08:05

WORD OF WELCOME

Ms Sarah Hartley

Student Representative (Organising Committee)

Assisted by: Dr Chantelle Liebenberg

Chairperson: Student Research Forum

08:05 - 08:15

OPENING

Dr Deirdre van Jaarsveldt

Kerneels Nel Medal Winner 2016

Best research article in an educational discipline that has been published

SESSION 1

Chairperson: Ms Kananelo Matang

(Assisted by: Dr Thandi Letsie)

08:15 - 08:30 (1)

THE OUTCOME OF ADULT HIV-POSITIVE/AIDS AND HIV-NEGATIVE PATIENTS WITH INFECTIVE PULMONARY DISEASES IN THE MULTI-DISCIPLINARY INTENSIVE CARE UNIT OF UNIVERSITAS ACADEMIC HOSPITAL

M Brink, A Gericke, N Gomes, C Jnawali, EL Oosthuizen, T van den Heever

Department of Critical Care, School of Medicine

08:30 - 08:45 (2)

HEALTH MESSAGE PREFERENCES OF ADULT WOMEN FROM TOWNSHIP AREAS IN MANGAUNG, FREE STATE

S Beeton, D Greyvensteyn, C Oelofse, T Botha, VL Van den Berg, NML Meko, M Nel

Department of Nutrition and Dietetics, School for Allied Health Professions

08:45 - 09:00 (3)

A DESCRIPTION OF THE POSTURE OF MOTHERS PARTICIPATING IN KANGAROO MOTHER CARE IN UNIVERSITAS TERTIARY ACADEMIC HOSPITAL

A Bezuidenhout, M Dreyer, N le Grange, R Leigh, A Watkins, R Weyers, A Swanepoel, C van Rooyen

Department of Occupational Therapy, School for Allied Health Professions

09:00 - 09:15 (4)

MEASUREMENT OF HEALTH THREAT COMMUNICATION OF PATIENTS DIAGNOSED WITH DIABETES AT MUCPP PHC IN MANGAUNG

S Hartley, H Dempers, A Gravett, P Mokoena, B Potgieter, T Phakoe, P Sibuyi, M Steyn

School of Nursing

09:15 - 09:30 (5)

BEREAVEMENT OVERLOAD AND ITS EFFECTS ON, AND RELATED COPING MECHANISMS OF PRIMARY HEALTHCARE AND OTHER WORKERS AT NATIONAL DISTRICT HOSPITAL IN BLOEMFONTEIN, FREE STATE

Z Allie, E Le Roux, K Mahlatsi, B Mofokeng, ZA Ramoo, K Sibiya, J van Rooyen

Department of Family Medicine, School of Medicine

- 09:30 - 09:45 (6) **THE ACCESSIBILITY OF SECONDARY SCHOOLS FOR LEARNERS WITH MOBILITY LIMITATIONS**
S Crafford, M de Bruyn, A de Lange, H Oosthuizen, J van Zyl, M Venter, L Vermaak
Department of Physiotherapy, School for Allied Health Professions
- 09:45 - 10:00 (7) **THE EMOTIONAL AND PHYSICAL CHALLENGES OF VISUALLY IMPAIRED STUDENTS ON THE MAIN CAMPUS OF THE UNIVERSITY OF THE FREE STATE, BLOEMFONTEIN, SOUTH AFRICA**
E Kempen, A Erasmus, F Prinsloo, D van Heerden
Department of Optometry, School for Allied Health Professions
- 10:00 - 10:15 (8) **THE CAUSES OF BURN WOUNDS AMONG ADULT PATIENTS TREATED AT PELONOMI HOSPITAL**
B Daffue, D Moolman, S Ferreira, L Roos, L Schoeman, S Smit
Department of Surgery, School of Medicine
- 10:15 - 10:30 TEA AND REFRESHMENTS

SESSION 2

Chairperson: Ms Robyn Leigh
(Assisted by: Prof Corinna Walsh)

- 10:30 - 10:45 (9) **EXPLORING EMOTIONAL REGULATION STRATEGIES USED BY EARLY ADOLESCENTS IN PRIMARY SCHOOLS IN THE SOUTHERN FREE STATE**
A van der Merwe, C Hobbs, C Wepener, J van Vuuren, M Schoeman, M Nell, M van Wyk, M Strauss, C van Rooyen
Department of Occupational Therapy, School for Allied Health Professions
- 10:45 - 11:00 (10) **THE EFFECT OF DIFFERENT ANAESTHETIC MASK SHAPES ON THE ANATOMICAL DEAD SPACE IN SIMULATION MODELS OF NEONATES, INFANTS, CHILDREN AND ADULTS**
L Botes, J Jacobs, R Rademeyer, S van der Merwe, L van Heerden, BJS Diedericks
Department of Anaesthesiology, School of Medicine
- 11:00 - 11:15 (11) **CELL PHONE CULTURE IMPACTING HEALTH EDUCATION DELIVERY IN MANGAUNG**
L Deacon, A Bosch, C Henning, H van der Merwe, R Lategan-Potgieter, E du Toit, C van Rooyen
Department of Nutrition and Dietetics, School for Allied Health Professions
- 11:15 - 11:30 (12) **REPORTED HUMAN RABIES VIRUS CASES IN SOUTH AFRICA, 2004-2015**
T Krügel, C Goosen, M Claassen, N du Toit, M Slabbert, FJ Burt, D Goedhals
Department of Medical Microbiology and Virology, School of Medicine
- 11:30 - 11:45 (13) **AN EVALUATION OF THE INTER-RATER RELIABILITY OF THE THIRD YEAR MEDICAL STUDENTS' CLINICAL SKILLS OBJECTIVE STRUCTURED CLINICAL EXAMINATION AT THE UNIVERSITY OF THE FREE STATE**
V de Beer, J Nel, N Pieterse, A Snyman, MJ Labuschagne
Simulation and Clinical Skills Unit, School of Medicine

- 11:45 - 12:00 (14) **SATISFACTION OF SIMULATION BASED LEARNING AMONG 4TH YEAR PHYSIOTHERAPY STUDENTS AT THE UNIVERSITY OF THE FREE STATE**
M Janse van Rensburg, C Loubser, J Potgieter, H Oosthuizen, S Mc Anda
Department of Physiotherapy, School for Allied Health Professions
- 12:00 - 12:15 (15) **THE OCULAR EFFECTS OF SMOKING ON PATIENTS AT NATIONAL DISTRICT HOSPITAL IN BLOEMFONTEIN**
M Oberholzer, J Vorster, N Grobbelaar, G van Wyk, L Potgieter
Department of Optometry, School for Allied Health Professions
- 12:15 - 12:30 (16) **THE APPROPRIATENESS OF SEROLOGICAL TEST REQUESTS FOR SYSTEMIC LUPUS ERYTHEMATOSUS SENT TO THE UNIVERSITAS LABORATORY OF THE NHLS IN BLOEMFONTEIN**
D de Necker, H Labuschagne, L Louw, P Schall, A van der Westhuizen, MJ Coetzee
Department of Haematology and Cell Biology, School of Medicine
- 12:30 - 12:45 (17) **READABILITY ASSESSMENT OF HEALTH PAMPHLETS/POSTERS**
C Coetzer, E Duncker, C Louw, E Maree, A Maritz, D Theron, J van der Walt, L van Niekerk, TH van Schalkwyk, N Victor
School of Nursing

ACKNOWLEDGEMENTS

Mr Lehlohonolo Lempetje

ANNOUNCEMENT OF PRIZE WINNERS

Dr Chantelle Liebenberg

THE OUTCOME OF ADULT HIV-POSITIVE/AIDS AND HIV-NEGATIVE PATIENTS WITH INFECTIVE PULMONARY DISEASES IN THE MULTI-DISCIPLINARY INTENSIVE CARE UNIT OF UNIVERSITAS ACADEMIC HOSPITAL

M Brink, A Gericke, N Gomes, C Jnawali, EL Oosthuizen,
T van den Heever

Department of Critical Care
School of Medicine

Introduction and aim: South African public hospitals have a limited number of beds available for patients in the Multi-Disciplinary Intensive Care Unit (MDICU). To ensure the appropriate distribution of medical resources amongst patients, a selection criterion needs to be developed for the admission of patients to the MDICU. The study aimed to investigate the outcome of adult HIV-positive/AIDS and HIV-negative patients admitted with an infective pulmonary disease to the Multi-Disciplinary Intensive Care Unit (MDICU) of Universitas Academic Hospital in Bloemfontein.

Methods: A retrospective analytical study, using 74 files from the MDICU of Universitas Academic Hospital for the period 1 January 2013 to 29 March 2016.

Results: 24.3% of HIV-negative patients died whereas only 16.2% of HIV-positive patients died; therefore, it was more likely for a HIV-positive patient to be discharged. The most prevalent ventilated-associated diagnosis was hospital-acquired pneumonia (HAP) and was more frequently seen in HIV-negative patients (54.6%). *Pneumocystis jirovecii* pneumonia (PJP) was only found in HIV-positive patients and of these patients 60% had a CD4+ count of less than 200. HIV-negative patients with community-acquired pneumonia (CAP) had a significantly higher mortality rate of 35.7% in comparison to their HIV-positive counterparts of only 7.7%. Patients were more likely to have pulmonary tuberculosis (PTB) in conjunction with other infective pulmonary diseases (64.3%), rather than having PTB exclusively. 70% of HIV-positive patients with PTB had a CD4+ count of less than 200. 29% of female patients were pregnant and fared better in the MDICU. Pregnant females had a mortality rate of only 27.3%, whereas non-pregnant females had a mortality rate of 48.1%.

Conclusion: HAP was the infective pulmonary disease yielding the highest mortality rate. HIV-positive patients fared better in the MDICU.

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HEALTH MESSAGE PREFERENCES OF ADULT WOMEN FROM TOWNSHIP AREAS IN MANGAUNG, FREE STATE

S Beeton, D Greyvensteyn, C Oelofse, T Botha,
VL Van den Berg, NML Meko, M Nel

Department of Nutrition and Dietetics, School for Allied Health Professions

Introduction: South African women have a high prevalence of overweight and obesity, and associated non-communicable diseases (NCDs). Globally, mobile health messaging (mHealth) have been successfully used to address NCDs. This study investigated the preferences for health messaging, particularly mHealth, among women in the township areas of Mangaung, Free State.

Methods: An observational cross-sectional descriptive study was conducted on a convenience sample of 162 adult women attending services at randomly selected churches in township areas in Mangaung. Socio-demographics and data on health message preferences were obtained by self-administered questionnaire, and body mass index (BMI), waist-hip ratio (WHR) and waist-to-height ratio (WtHR) by standard procedures.

Results: Overall, 80.2% of the sample were overweight/obese, whilst 53.7% and 78.5%, respectively, had WHR and WtHR putting them at high risk for NCDs; 39.2% reported having hypertension and 14.2% having diabetes. Most lived in brick houses/apartments (96.0%) and had completed grade 12 (77.1%); 21.6% earned more than R17 000 per month, and 96.9% owned a cell phone. After word of mouth (39.5%), SMS's (38.9%) was the most preferred source for health messaging, although only 26.3% had received cell phone health messages before. While 73.1% were worried about their health, 83.3% said they followed health advice they receive, and 59.1% were willing to use airtime/data to receive health messages. Most preferred short health messages (79.8%) in English (66.1%) or Sesotho (29.4%), with correct spelling and grammar (91.7%), some whole-word capitalisation (83.5%) and more words than pictures (69.7%).

Conclusion: This study found high penetration of cell phones and a high preference for receiving health messages via cell phone in a population of fairly well-educated women, with moderate socio-economic status and very high levels of overweight/obesity and NCDs, from urban township areas in central South Africa. This highlights the potential of mHealth to address NCDs in these populations.

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A DESCRIPTION OF THE POSTURE OF MOTHERS PARTICIPATING IN KANGAROO MOTHER CARE IN UNIVERSITAS TERTIARY ACADEMIC HOSPITAL

A Bezuidenhout, M Dreyer, N le Grange, R Leigh, A Watkins, R Weyers, A Swanepoel, C van Rooyen

Department Occupational Therapy
School for Allied Health Professions

Introduction and Aim: During participation in Kangaroo Mother Care (KMC) barriers such as pain and fatigue, as a result of seating problems, may prevent meaningful engagement in the co-occupation of child rearing. Limited literature identifying/quantifying the physical postural demands placed on mothers participating in KMC exist. The study objected to assess and describe the postures of mothers participating in KMC.

Methodology: A descriptive quantitative study design with a non-randomized, purposive sample, resulting in 11 participants. A demographic and medical questionnaire as well as an adapted plumb line assessment tool, focusing on anterior, posterior and lateral postural planes, was utilized. A biostatistician analysed the data.

Results: No significant postural deviations in the anterior and posterior planes were found, however 70% of participants had moderate to severe deviations in their posture when compared to a baseline in the lateral plane.

Conclusion: The role of occupational therapists is thus not only training the mothers in KMC, but recommending seated positions that will optimize the procedure to mutually benefit both infant and mother. Further research and intervention is recommended with regards to seated postures assumed during KMC, as to optimize functionality and comfort.

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MEASUREMENT OF HEALTH THREAT COMMUNICATION OF PATIENTS DIAGNOSED WITH DIABETES AT MUCPP PHC IN MANGAUNG

S Hartley, H Dempers, A Gravett, P Mokoena, B Potgieter, T Phakoe, P Sibuyi, M Steyn

School of Nursing

Introduction and aim: It is estimated that 422 million people were living with diabetes globally in 2014 and the number of people living with diabetes worldwide has increased more than four times since the 1980's. Being diagnosed with diabetes can have a large impact on the individual and immediate family. This is why the way health education is brought across by health care practitioners is important. The way in which health education is presented influences the patients' perception of their illness and their ability to cope with their perceived health risks. For this reason, health threat communication is an integral component of managing illnesses (Lawson, Bundy, & Harvey, 2007, p. 117). The aim of the study was to assess patients' diagnosed with diabetes perceptions of health threat communication.

Methodology: For this study, quantitative descriptive design will be used as we will be making use of a questionnaire to produce data that observes, describes and documents the statistics of health threat communication in Mangaung.

Results: There were mixed results which will be discussed.

Conclusion: One can never be too complacent when giving health education. Especially in chronic illnesses where the patient is such a vital role-player in managing the illness.

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BEREAVEMENT OVERLOAD AND ITS EFFECTS ON, AND RELATED COPING MECHANISMS OF PRIMARY HEALTHCARE AND OTHER WORKERS AT NATIONAL DISTRICT HOSPITAL IN BLOEMFONTEIN, FREE STATE

Z Allie, E Le Roux, K Mahlatsi, B Mofokeng, ZA Ramoo, K Sibiya, J van Rooyen

Department of Family Medicine
School of Medicine

Introduction and aim: In South Africa many doctors are tasked with the responsibility of disclosing the unfavourable and disastrous outcome that the patient may suffer within the ward, death. With that, beyond the family, the greatest emotional strain is placed on doctors, nurses and medical students that have to work in direct association with the patient. These circumstances, therefore, play a pivotal role in the healthcare workers' attitude and behaviour towards their next patient. Thus, bereavement overload and its effects on, and related coping mechanisms of primary healthcare workers at National District Hospital in Bloemfontein was investigated.

Methods: An analytical cross-sectional study design was adopted with the aid of an interviewer-administered questionnaire. The target population consisted of 45 doctors, nurses, senior students and ward administrators in wards 4, 5, 6 and 8 at National District hospital, working during August, September and October 2016.

Results: All 45 primary healthcare workers were interviewed. 48.9% of the primary healthcare workers experienced bereavement overload, with 62.2% of the healthcare workers having positive coping mechanisms. After experiencing patient death, many of the primary healthcare workers treated their patients in a more positive manner. However, each healthcare worker dealt differently with patient death. The negative and positive aspects of these coping mechanisms varied greatly and were dependent on the duration the healthcare worker had spent in the medical field, with negative coping mechanisms being directly correlated to a longer duration in the medical field.

Conclusion: Patient death is an event that all healthcare workers will face at some point. It is important that solutions such as counselling and educational programmes, on coping with the effects of patient death, be implemented. The desirable outcome is that healthcare workers who suffer from bereavement overload and the effects of patient death, become more cautious and dedicated to the patient's wellbeing without expense to themselves.

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THE ACCESSIBILITY OF SECONDARY SCHOOLS FOR LEARNERS WITH MOBILITY LIMITATIONS

S Crafford, M de Bruyn, A de Lange, H Oosthuizen, J van Zyl, M Venter, L Vermaak

Department of Physiotherapy
School for Allied Health Professions

Introduction: The South African constitution declares that all South Africans have the right to basic and accessible education. To ensure this, physical facilities at public schools need to be accessible to all learners with physical mobility limitations. Accessibility of secondary schools, and challenges faced by learners with physical mobility limitations within the school environment in South Africa is largely unknown.

Aim: To determine the accessibility of secondary schools in Bloemfontein for learners with physical mobility limitations. An additional objective was to identify challenges faced by learners with physical mobility limitations when mobilising in the school environment.

Methodology: Thirteen randomly selected Bloemfontein secondary schools were recruited into Phase I of this descriptive, observational study. Physical facilities were evaluated in line with the National Minimum Uniforms Norms and Standards for School Infrastructure. Data on school infrastructure was collected using a self-developed questionnaire. Thirty four learners with physical mobility limitations at a Bloemfontein special school were purposively recruited into Phase II, where challenges with regards to accessibility was evaluated using a self-developed questionnaire. Ethical clearance from the Health Sciences Research Ethics Committee (UFS-HSD2016/1314) and permission from the Free State Department of Education was obtained.

Results & Discussion: Phase I collected data from 13 secondary schools. All schools with multiple storied buildings (n=11) had stairs, with only 18.2% having ramps. The majority of schools (n=8) had parents with disabilities. Most schools' toilets (n=12), tuck shops (n=9) and playgrounds (n=9) were inaccessible to learners with physical mobility limitations. Phase II collected data from 11 learners. Learners reported challenges with accessibility relating to tuck shops (n=5) and hallways (n=3).

Conclusion: Learners face various barriers when mobilising in secondary schools due to inaccessible bathrooms, tuck shops, hallways and playgrounds. Accessibility of schools should be evaluated so that necessary adaptations can be made, ensuring accessibility for all.

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THE EMOTIONAL AND PHYSICAL CHALLENGES OF VISUALLY IMPAIRED STUDENTS ON THE MAIN CAMPUS OF THE UNIVERSITY OF THE FREE STATE, BLOEMFONTEIN, SOUTH AFRICA

E Kempen, A Erasmus, F Prinsloo, D van Heerden

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School for Allied Health Professions

Purpose: The aim of this study was to investigate the emotional and physical challenges of visually impaired students on the main campus of the University of the Free State, Bloemfontein, South Africa.

Methods: A quantitative descriptive study was done on a group of 9 visually impaired students enrolled at the main campus of the University of The Free State, Bloemfontein. The participants included in the study were sampled from the Unit for Students with Disabilities on the campus of the University of the Free State. Students who gave consent were included as participants. Data was gathered through conducting structured individual interviews with participants by means of a questionnaire.

Results: The participants (n=9) included mostly men (56%). Participants from different faculties on campus were used in the study of which most of them were enrolled at the faculty of Humanities (45%). The leading cause of visual impairment was found to be Glaucoma (33.33%). Some of the greatest challenges faced by participants included not being able to navigate unfamiliar spaces on campus or effectively use ATM's on campus. Some (34%) felt that it was difficult for them to obtain information regarding classes and studies. Most participants stated that the University offers adequate emotional support (56%) as well as physical support (89%) to them. The majority of participants (56%) felt that fellow students on campus treated them differently because of their visual impairment.

Conclusion: These results found that challenges faced by students on the Main Campus of The University of the Free Sate are quite extensive. Although there is support by the University to visually impaired students to overcome daily challenges, the study emphasizes there are still challenges that need to be addressed.

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THE CAUSES OF BURN WOUNDS AMONG ADULT PATIENTS TREATED AT PELONOMI HOSPITAL

B Daffue, D Moolman, S Ferreira, L Roos, L Schoeman, S Smit

Department of Surgery
School of Medicine

Introduction and aim: Burns are a worldwide problem, accounting for approximately 265 000 deaths per annum in low- and middle-income countries. Our aim for this study was to determine the causes of burn wounds among individuals 18 years and older in Pelonomi Hospital (Bloemfontein) during the period July 2016 to early January 2017.

Methods: The format of the study was a prospective, cross-sectional study. The target population consisted of all patients 18 years and older seeking treatment for burn wounds. Only 49 patients were available for interviewing during this period of time. The data was collected by means of a structured interview using a questionnaire. A student researcher/s visited the Burn Wound Unit on a weekly basis to collect data. We obtained written informed consent from all participants.

Results: 77.6% of the reported incidents were classified as accidental while 22.4% of the incidents were classified as intentional. 38.8% of patients' injuries were caused by flames. Alcohol consumption occurred in 39.5% of accidental incidents. 45.5% of intentional victims did not take any legal steps against their assailant. 46.9% of patients were unemployed at the time and 55.1% received less than R1000 per month. The median TBSA (total body surface area) was 10.2%.

Conclusion: The predominant cause of burn wounds were flames and injuries were mostly accidental and domestic in nature. The left upper thigh was burnt most often and a few patients had life threatening burns.

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EXPLORING EMOTIONAL REGULATION STRATEGIES USED BY EARLY ADOLESCENTS IN PRIMARY SCHOOLS IN THE SOUTHERN FREE STATE

A van der Merwe, C Hobbs, C Wepener, J van Vuuren, M Schoeman, M Nell, M van Wyk, M Strauss, C van Rooyen

Department of Occupational Therapy
School for Allied Health Professions

Introduction: Globally, the mental health of adolescents is of core concern and is therefore a priority on the World Health Organization's agenda. In a South African rural context, adolescents' exposure to violence, substance abuse, HIV and other factors leads to an increased vulnerability for developing mental health problems. Furthermore, the shape of adolescence is changing due to the earlier onset of puberty. Early adolescents thus experience physical changes without having developed adequate emotional regulation skills. This threatens their occupational engagement, which places early adolescents at risk for the development of mental illness. Limited literature exists regarding emotional regulation strategies used by early adolescents.

Methodology: A quantitative, descriptive study was conducted using a questionnaire to describe the frequency of emotional regulation strategies used amongst 307 early adolescents, ages 10-14 years. Data was analyzed using descriptive statistics.

Results: Strategies are classified as enablers or risks for occupational participation. A large percentage of the population engaged in high-risk behaviour, such as self-harm, substance use and sexual activities. Spiritual and social engagement were prominent strategies which positively affects occupational engagement.

Conclusion: Improved understanding of the strategies could assist therapists in assessment and intervention, contributing to mental health programmes and promote early detection of adolescents at risk.

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THE EFFECT OF DIFFERENT ANAESTHETIC MASK SHAPES ON THE ANATOMICAL DEAD SPACE IN SIMULATION MODELS OF NEONATES, INFANTS, CHILDREN AND ADULTS

L Botes, J Jacobs, R Rademeyer, S van der Merwe, L van Heerden, BJS Diedericks

Department of Anaesthesiology
School of Medicine

Introduction and Aim: Dead space is the volume of air that does not participate in alveolar gas exchange, thus there is no perfusion during ventilation. It's important to keep dead space to a minimum for the prevention of any complications such as hypercapnia especially in infants and children. The purpose of this study was to compare the dead space contribution of differently shaped masks, of the same size, by measuring the volume of each mask.

Methods: The study was conducted in the Simulation Unit of the School of Medicine of the University of the Free State. The masks used for the study are the same as those currently used in Universitas Academic Hospital. Simulation models in the simulation unit were used to determine the dead space. Each mask was filled with water on the simulation model and also on a flat surface. The water was then measured and the data collected was compared to each other.

Results: The volume of the rounded masks was greater than the volume of the formed masks. The nose, lips and facial contours lead to a significant difference between measurements on flat surfaces and simulation models' faces. The amount of cuff inflation did not lead to a significant change in mask volume.

Conclusion: Formed masks are to be used as mask of choice as they contribute less to dead space than rounded masks. Applied force decreases the volume of the mask.

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CELL PHONE CULTURE IMPACTING HEALTH EDUCATION DELIVERY IN MANGAUNG

L Deacon, A Bosch, C Henning, H van der Merwe,
R Lategan-Potgieter, E du Toit, C van Rooyen

Department of Nutrition and Dietetics,
School for Allied Health Professions

Introduction: Overweight and obesity remains a challenge in South Africa, placing a major burden on health systems and innovative and cost-effective interventions are needed. Cell phones are considered the most penetrating and growing medium in mass media. The aim of the study was to determine cell phone ownership and cell phone usage and describe the socio-demographic background of Black women, residing in Mangaung, Bloemfontein to define cell phone culture that may impact health education delivery.

Methods: A cross-sectional, descriptive study was performed during May 2017 at the Mangaung University Community Partnership Programme (MUCPP) primary health care clinic in Bloemfontein, South Africa. A convenience sample of 344 Black women, older than 18 years, that visited the MUCPP clinic, were included. Data on cell phone ownership, usage and socio-demographic background was collected, using a questionnaire during a structured interview.

Results: The median age of participants was 32 years, with 50.0% that completed grade 12, 50.5% unemployed and 53.6% receiving social grants. The majority owned a cellphone (84.0%) and 57% owned a smart phone. A broken phone was the main reason for not owning a cellphone. Median household income was R2500. A median of R60 was spend on cell phones monthly, which included R50 airtime expenses. Electronic media was indicated as the preferred medium for health information (41.2%) followed by clinics (29.1%). Of participants, 71.3% were willing to pay a median of R20 for a weight loss application.

Conclusion: Despite low median income, the majority of participants owned a cell phone and indicated that they are willing to pay for a weight-loss application. As electronic media was also indicated as preferred source of health education, development of a free/ low cost application is recommended to address the problem of overweight/ obesity in this population.

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REPORTED HUMAN RABIES VIRUS CASES IN SOUTH AFRICA, 2004-2015

T Krügel, C Goosen, M Claassen, N du Toit, M Slabbert, FJ Burt,
D Goedhals

Department of Medical Microbiology and Virology
School of Medicine

Introduction and aim: Rabies is a destructive, fatal viral infection which is transmitted through bites and scratches from infected animals. The aim of this study was to determine the profile of reported rabies cases in South Africa from 2004 to 2015, with regards to demographics, location, the source of infection, type of exposure and post-exposure prophylaxis.

Methods: For this retrospective descriptive study, the study population consisted of males and females in South Africa diagnosed with rabies infection from 2004 to 2015. Data was collected from the National Institute for Communicable Diseases (NICD) Annual Reports, quarterly Surveillance Bulletins and monthly Communiqué, available in the public domain.

Results: Of the 132 cases 32% were from Limpopo, 30% from Kwa-Zulu Natal, and 26% from the Eastern Cape. The majority of the patients (55%) were 10 years and younger, and 72.1% were males. Nearly three quarters (73.3%) of patients were bitten by dogs. The number of exposed patients seeking treatment was low.

Conclusion: There are specific high risk areas and groups which should be educated regarding signs and behaviour of infected animals and urgency of treatment.

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AN EVALUATION OF THE INTER-RATER RELIABILITY OF THE THIRD YEAR MEDICAL STUDENTS' CLINICAL SKILLS OBJECTIVE STRUCTURED CLINICAL EXAMINATION AT THE UNIVERSITY OF THE FREE STATE

V de Beer, J Nel, N Pieterse, A Snyman, MJ Labuschagne

Simulation and Clinical Skills Unit
School of Medicine

Introduction and aim: An Objective Structured Clinical Examination (OSCE) is a performance-based examination used to assess students in medicine and is the closest form of assessing clinical skills with or without using real patients. The aim of this study was to determine the inter-rater reliability of the final mark allocations during assessment of the third-year medical students' final OSCE at the University of the Free State.

Methods: This study was a cross-sectional analytical study which included the 24 raters who assessed 145 students. There was a Urology history taking station, a Respiratory examination station and a Gynaecology skill assessment station. Two raters per station, each independently assessed the same student for the same skill by completing their individual assessment rubrics (inter-rater reliability). The total marks and the categorised global rating scale were analysed. The Shrout-Fleiss intra-class correlation was used on the students' final marks. For this study, it was decided that a mean score difference with a margin of less than 5% between the final marks that raters allocated was considered as acceptable.

Results: 58.3% of rater pairs fell outside the set margin of 5%. Raters disagreed on 52.3% of the Global Rating marks allocated. All the stations' intra-class correlation fell above 75%. The Urology History taking station had the lowest mean score, the highest inter-rater reliability and the raters agreed the most on the global rating.

Conclusion: The researchers conclude that the inter-rater reliability should be higher and that the rubrics are effective.

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SATISFACTION OF SIMULATION BASED LEARNING AMONG 4TH YEAR PHYSIOTHERAPY STUDENTS AT THE UNIVERSITY OF THE FREE STATE

M Janse van Rensburg, C Loubser, J Potgieter, H Oosthuizen, S Mc Anda

Department of Physiotherapy
School for Allied Health Professions

Introduction: Simulation Based Learning (SBL) recently became a standard component of health care professional (HCP) training. Research has concluded that many concepts covered in SBL can be transferred to HCP training. There is still a gap in knowledge regarding the effect SBL has on physiotherapy (PT) training.

Aim: To determine if 4th year undergraduate PT students are satisfied with SBL as a learning method.

Methodology: A quantitative descriptive study was conducted. A purposively chosen sample consisted of all 4th year undergraduate PT students enrolled at the UFS. The standardised questionnaire used, included domains relating to SBL, namely: knowledge, skills, environment, resources and faculty. Ethical clearance was obtained from the Health Sciences Research Ethics Committee (HSREC) and permission from relevant stakeholders.

Results: Thirty-three participants were included (96, 97% female) with ages ranging between 21 and 23 years. The identified strengths of SBL included: improvement of retention of knowledge (87, 88%), application of skills (87, 88%), communication (72, 73%), psychomotor skills competencies (60, 61%) and clinical decision-making ability (60.61%). The challenges included: difficulty treating the mannequin as a real patient (39, 39%), more assistance from instructor needed (27, 27%) and lack of realism of SBL environment (27, 27%). On a scale from one to ten all students rated their SBL experience between seven and ten. Students (96, 97 %) agreed that SBL was a useful learning method and 90, 91% suggested it to be utilised more frequently in the course.

Conclusion: 4th Year physiotherapy students were satisfied with SBL as a learning method, as it aids with the retention of knowledge, application of skills, improves competency of skills and improves communication. However, the challenges identified with regards to realism of the mannequin, comfort with SBL environment and the assistance from instructors need to be addressed to improve student satisfaction with SBL.

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THE OCULAR EFFECTS OF SMOKING ON PATIENTS AT NATIONAL DISTRICT HOSPITAL IN BLOEMFONTEIN

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Background: Smoking is the leading preventable cause of death. Active and passive smoking creates a variety of health related problems that affects the cardiovascular and respiratory systems. Epidemiological data linked cigarette smoking as a risk factor for many ophthalmological disorders, including disorders that affect the stability of the ocular surface.

Objectives: The objectives of this study was to collect information regarding the ocular effects of smoking. The study was conducted to set a base-line of results for researchers within South Africa.

Methods: An analytical, case-controlled study was conducted. The sample population for this study included 31 smoking participants and were matched with 31 non-smoking participants (the control group). Participants were chosen according to the inclusion, exclusion and matching criteria. After consent was received from a participant, a structured interview took place with the use of a questionnaire followed by the conduction of four non-invasive tests. These tests included Tear Break-Up Time (TBUT), direct ophthalmoscopy and biomicroscopy of the conjunctiva, cornea and crystalline lens. These tests were performed in a manner described by Carlson and Kurtz.

Results: The mean value tear break-up time for smoking participants were found to be significantly lower than the mean value for non-smoking participants. The prevalence of Meibomian gland dysfunction was higher in smokers compared to non-smokers. This study showed no prevalence of superficial punctate corneal staining. No other significant anterior or posterior ocular changes were found in smoking participants when being compared to non-smoking participants.

Conclusions: Ocular effects of smoking can affect vision, comfort and health. Information about these ocular effects should be distributed further amongst health care practitioners and patients to ensure optimal management and treatment of these conditions.

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THE APPROPRIATENESS OF SEROLOGICAL TEST REQUESTS FOR SYSTEMIC LUPUS ERYTHEMATOSUS SENT TO THE UNIVERSITAS LABORATORY OF THE NHLS IN BLOEMFONTEIN

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Introduction and aim: Classification criteria are used to diagnose Systemic Lupus Erythematosus (SLE), the most prominent being the 1997 ACR and 2012 SLICC criteria. The objective of this study was to determine whether these criteria are used when requesting laboratory tests. The general completeness and demographics of test requests were also determined.

Methods: Test request forms sent to the Immunohaematology bench of the NHLS laboratory in Bloemfontein during four months in 2015 were used. Forms that stated SLE as the "reason for request", and all forms that requested at least one immunological test in the SLICC or ACR criteria, were included. The requesting patterns were compared to the classification criteria and the completeness and demographics summarized.

Results: Out of 1618 forms, 104 had SLE as the "reason for request". The patients suspected of having SLE were mostly female (83.3%). The median age in women suspected of having SLE was 30 years, and 38 in men. Out of all 1618 forms, the doctor's contact number was missing 50.4% of the time and the "reason for request" was omitted in 35.3% of the forms. Only 1.9% of forms did not request any test in the ACR or SLICC criteria for SLE. The antinuclear antibody test was requested the most (83.7%) when SLE was suspected with the anti-dsDNA test second (40.4%).

Conclusion: Testing for SLE is mostly in line with the set criteria. The demographics of patients tested for SLE are in line with international trends. Laboratory request forms are inadequately completed.

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READABILITY ASSESSMENT OF HEALTH PAMPHLETS/POSTERS

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Introduction and aim: Readability is defined as the skill of understanding a text without difficulty and with sufficient comprehension due to the style the text is written in (Houghton Mufflin Harcourt, 2016). Health pamphlets or posters are useful educational tools as they are relatively economical and easy to distribute. However it is of little value if the patients cannot understand the material. It is extremely important for patients to obtain, interpret and understand the health education to improve their health (Badarudeen, S. & Sabharwal, S., 2010). The aim of the study was to investigate the level of readability of pamphlets that were handed out to primary healthcare facilities in Bloemfontein.

Methodology:

In this study four readability formulas were used to test the readability of the material:

- i. Coleman-Liau index
- ii. Flesh readability ease
- iii. The Flesch-Kincaid readability test
- iv. The Fry readability test

Results: The different pamphlets rendered different results but in general the results were encouraging.

Conclusion: With the financial constraints in the health sector pamphlets are an economic and valuable resource. It is imperative to assess each one before making them available to the public for its readability.

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