



TYGERBERG STUDENT COUNCIL
Universiteit Stellenbosch

Student Academic Year Day

12 August 2015

| | | | |
|-------|---|----------------|--|
| 13:00 | | | Welcoming |
| 13:10 | Y Chotoo, M Greeff, L Kemp, A Nowers, T Strydom & M Theron | B. OT | The Effect of an Occupational Therapy-led Drumming Group on the Mental Well-being of Acute Psychiatric In-patients |
| 13:30 | V Viljoen, L Van der Merwe, & R Wood | MBChB | Quality of Care for Patients with Non-Communicable Diseases in the Dedza District, Malawi |
| 13:50 | EM De Bruin, A Kunneke, I Schutte, KJ Visser, ML Marais, N Koen & Y Smit | BSc. Dietetics | An Investigation into the Internal and External Factors Contributing to Food Wastage in the Stellenbosch University Residences, from the Provider's Points of View. |
| 14:10 | S Von Caues | MBChB | A Retrospective Review of Fatal Electrocution cases at Tygerberg Forensic Pathology Services over a 5-year Period from 1 January 2008 to 31 December 2012. |
| 14:30 | C Baeza Basigalupo, K Engelbrecht, R Ochse, & C Seward | B. OT | Adults with Physical Disabilities and their Experiences of Social Relationships and Community Living: A study Within a Low-Socioeconomic, Rural Community in Avian Park, Worcester |
| 14:50 | H Narotam | MBChB | The Experiences of Expressive Aphasic Patients in the Acute Care Setting following Brain Injury: A Qualitative Study |
| 15:10 | M Maree, M Beukes, J Matthee, & A Boshoff | B. OT | Exploring Existing Capabilities amongst Mentors in their Role towards Preventing Foetal Alcohol Spectrum Disorder (FASD) in a Rural Community |
| 15:30 | Break | | |
| 15:50 | K Kotze | MBChB | Determining Student Experience of Clinical Teaching in a South African Academic Hospital: Validating an Adapted Questionnaire |
| 16:10 | C Seager, N Bold, M Alexander, & J Potgieter | BSc. Dietetics | The Nutritional Screening of Adult Patients on Admission to Tygerberg Hospital, Western Cape, South Africa |
| 16:30 | H Louw | MBChB | Assessing Childhood Trauma History and Anxiety in Adults with Systemic Lupus Erythematosus (SLE): a Case Controlled Study at Tygerberg Academic Hospital |
| 16:50 | J Allderman, MJ Carstens, H Malan, S Meiring, A Otto, JC Van Niekerk, E Van Niekerk | Bsc. Physio. | The Effectiveness of a "Traditional Exercise Program" Supplemented with Whole Body Vibration Compared to a "Traditional Exercise Program" Alone on Muscle Strength, Muscle Endurance, Balance and Functional impact/QoL in Adults with Fibromyalgia: A Systematic Review |
| 17:10 | H Van der Westhuizen | MBChB | Intimate Knowledge of a Disease: Experiences of Medical Students who Develop TB |
| 17:30 | EZ Zhang, A Lenhoff, M Jamieson, & N Erasmus | BSc. Dietetics | Assessment of Risk of Malnutrition in Hospitalised Children in Tygerberg Hospital, Western Cape using the STAMP Screening Tool |
| 17:50 | N. Kajee | MBChB | A Tangled Web of Definitions: Deconstructing Health Science Students' Concept of Research – A Qualitative Approach |
| 18:10 | N Hanekom, L Van Jaarsveld, L Viljoen & L Zietsman | B. OT | The Relationship between Bed Height to Leg length Ratio as a Possible Risk Factor to Falls in Older Adults in Residential Care Facilities |
| 18:30 | | | Thanks and Lucky Draw and short message from the sponsors |

The Effect of an Occupational Therapy-led drumming group on the mental well-being of acute psychiatric in-patients

Yushmika Chotoo, Megan Greeff, Leani Kemp, Amée Nowers, Tinka-Mari Strydom & Marisca Theron

A quasi-experimental research design was conducted on a sample group of 18 years and above, with a psychiatric diagnosis, at one psychiatric clinic in the Western Cape. The aim was to determine the immediate effect of an Occupational Therapy-led drumming session on anger, tension and enjoyment as components of mental well-being. Previous literature was found in three categories: Creative activities in Occupational Therapy and group therapy, Effect of music on mental well-being, and Effect of drumming on mental well-being. There is a lack of studies reflecting the specific use of drumming as a treatment modality for psychiatric in-patients. Therefore more research is needed to verify the use of drumming with psychiatric in-patients. Four assessment tools were used to obtain results: The BRUMS which measured tension and anger levels before and after the drumming session; The Enjoyment of Interaction Scale was used after the drumming intervention to determine the level of enjoyment the participants experienced; The GAD-7 and PHQ-9 measured anxiety and depression respectively (measuring overall anxiety and depression levels before intervention commenced). Enjoyment was experienced by all the participants as their scores ranged from 5-7 out of 7 when rated on the Enjoyment of Interaction Scale. Using the GAD-7, it was found that more than half of the participants had severe depression. According to the BRUMS it was noted the following groups experienced a greater effect in both anger and tension: male participants, participants in the age group of 49-59, coloured participants and participants with Major depressive disorder, recurrent with psychosis. With regards to the effect of drumming on age groups and gender, the results can be drawn back to literature found, stating that drumming is beneficial for all age groups and all gender groups. Previous studies conducted on psychiatric patients also showed a decrease in anxiety and depression with regards to drumming. Results showed a statistical significant ($P < 0.001$) in the decrease of anger and tension. Therefore drumming can be used as a treatment modality in psychiatric in-patients.

Quality of care for patients with Non-Communicable Diseases in the Dedza District, Malawi**V. Viljoen, LH. van der Merwe, RT. Wood****Professor Mash**

In Malawi, non-communicable diseases (NCDs) are thought to be a significant cause of deaths in adults. The aim of this study was to establish the extent of primary care morbidity related to NCDs, as well as to audit the quality of care, in the primary care setting of Dedza District, central Malawi.

It was a baseline audit using clinic registers and a questionnaire survey of senior health workers at 5 clinics focusing on care for hypertension, diabetes, asthma and epilepsy.

A total of 82581 consultations were recorded of which 2489 (3.0%) were for the selected NCDs. Only 5/32 structural criteria were met at all 5 clinics and 9/29 process criteria were never performed at any clinic. The only process criteria performed at all 5 clinics was measurement of blood pressure. The staff's knowledge on NCDs was basic and the main barriers to providing quality care were lack of medication and essential equipment, inadequate knowledge and guidelines, fee-for-service at two clinics, geographic inaccessibility and lack of confidence in the primary healthcare system by patients.

Primary care morbidity from NCDs is currently low although other studies suggest a significant burden of disease. This most likely represents a lack of utilisation, recognition, diagnosis and ability to manage patients with NCDs. Quality of care is poor due to a lack of essential resources, guidelines, and training.

An investigation into the internal and external factors contributing to food wastage in the Stellenbosch University residences, from the provider's points of view.

EM. De Bruin, A. Kunneke, I. Schutte, KJ. Visser, ML. Marais, N. Koen, Y.Smit

Due to the volume of food wastage and its environmental impact, the Division of Human Nutrition has been contacted by the waste management committee of Stellenbosch University to investigate the possible causes of food wastage among students living in residences. The aim of the study was to determine the food waste and to elicit suggestions for reducing food wastage from foodservice managers and employees.

An observational, cross-sectional study design with an analytical component was followed. All foodservice managers (FSM) (n=6) and employees (n=63) from seven selected residences, who were employed by the same private catering company, gave consent to participate in the study.

The FSM's questionnaire was interviewer-administered and the employee's questionnaire was self-administered. Food wastage for lunch and supper was measured in two purposefully selected Stellenbosch University residences, Res A and Res B, on three non-consecutive days. Production waste and plate wastage was measured using a calibrated electronic scale.

Although production waste was high in both residences, in most cases it was reused and thus did not contribute to actual wastage. The total plate waste for both residences was 13%. The set menu (served at Res B during lunch) generated more waste than the choice menu (served at Res A for lunch and supper, and at Res B for supper). Res B generated significantly more plate waste during lunch than Res A ($p=0.043$). Res B generated more plate waste during lunch than at supper.

Eighty three percent of the FSM's strongly agree that it is very important to reduce food wastage. While 33% of the FSM's strongly disagree that they themselves can do more to reduce food wastage, 50% of the FSM's strongly agree that the students can do more to reduce food wastage.

Reportedly, most employees understood and were aware of the environmental implications of food wastage. Practices in the FSUs were conducive to minimizing food wastage. Employees' attitude regarding food wastage was positive. Job title and foodservice related training had no statistically significant impact on the knowledge, attitudes and practices of the employees. Foodservice employees reported a dislike of various menu items as the main reason for food wastage by students.

The positive attitude of FSMs and employees should be encouraged. The unacceptably high plate wastage needs to be addressed by cultivating an awareness of the environmental impact of food wastage and actively by responding to students' feedback. The actual extent of production wastage needs further investigation.

**A retrospective review of fatal electrocution cases at Tygerberg Forensic Pathology Services over a 5-year period
from 1 January 2008 to 31 December 2012.**

S von Caues

Dr C Herbst

Electrocution as a cause of death has been discussed extensively throughout international literature. However, in South Africa, research on this particular topic is scarce. Only one previous study, has been conducted to describe the demographical and pathological profile of electrocution-related deaths in Gauteng, South Africa. This study aims to address the need for further research within this particular field, in order to emphasise the necessity for preventative measures.

Objective: To determine the demographical and pathological profile of fatal electrocution cases that presented to the Tygerberg Forensic Pathology Facility, Western Cape, and South Africa.

Method: This study is a retrospective, descriptive case-series of all the referred cases of deaths secondary to electrocution. All fatal electrocution cases presenting to the Tygerberg Forensic Facility from 1 January 2008 to 31 December 2012 was reviewed.

Result: A total of 39 cases were included in the study. The majority of victims were male (82.05%) and fell within the age group of 21-35 years old. Unfortunately the younger population was not spared from electrocution. Khayelitsha was undoubtedly the most prevalent area with 23 fatal cases (58.97%). Contrary to current literature, most of the incidents occurred (38.46%) outdoors. 31 low-voltage electrocution deaths (79.49%) and 8 high-voltage deaths (20.51%) occurred over the study period. With regards to the high-voltage deaths, 4 were reported to be due to illegal wiring or cable theft and the remaining 4 occurred at railway stations.

The pattern of injuries associated with electrocution deaths is complex. Burn wounds were noted in 34 cases. One case, however, showed no sign of injury. Congestion of organs was described in 36 cases (92.31%). Histology was only requested in 15 cases and proved once more that electrocution burns wounds present in various ways.

Conclusion: This study emphasises the need for better prevention strategies, specifically in informal settlements. Public education and better surveillance strategies may improve electrocution-related mortality.

**Adults with Physical Disabilities and their Experiences of Social Relationships and Community Living: A study
Within a Low-Socioeconomic, Rural Community in Avian Park, Worcester**

CB. Basigalupo, K. Engelbrecht, R. Ochse, C. Seward

Background: The study is concerned with the extent to which a person's social relationships and community living is affected by physical disability within the context of a low socioeconomic environment. Disability has been found to constrain a person's social functioning as it increases social isolation and, consequently, persons with disabilities (PWD) are excluded from community living. According to research, supportive social networks can act as facilitators to improving a PWD well-being. Further research, conducted in the Western Cape, has shown that community-based rehabilitation services are currently not achieving the outcome levels of community integration laid out by South Africa's National Rehabilitation Policy.

Aim: This study aimed to explore the experiences of adults living with physical disabilities with regards to their social participation; focusing on participants' social relationships and community living. According to these experiences, factors influencing participation could be explored.

Methods: A qualitative research study was conducted using a phenomenological research design. Seven adults, three women and four men over the age of 18 years, residing in Avian Park, Worcester formed part of the study. The sample was selected using a systematic random sampling technique from a database provided by the Western Cape Association for Persons with Disabilities. Homogenous focus groups were conducted as a means of data collection. The data was then analysed using an inductive, thematic analysis.

Results: The two themes that emerged from the analysis done were; *Dependence creates feelings of powerlessness and vulnerability* composing of the following three categories; *Environment limits community engagement, Family relationships have changed and Experiences of adversity*. The second theme is *Supportive relationships are a source of strength and bring people into contact with others*, composing of a further three categories; *Social networks are empowering, Group involvement is meaningful and Attitude as an enabler*.

Conclusion: The results from this study may be used to gain insight into the social experiences of adults from a rural, low socioeconomic context in South Africa. An understanding of a person's social functioning will enable rehabilitation services to better meet the needs of persons with physical disabilities.

The Experiences of Expressive Aphasic Patients in the Acute Care Setting Following Brain Injury: A Qualitative Study

H Narotam.

H Sammons

Introduction: Aphasia, or losing the ability to be receptive to the environment and respond verbally or in written words to stimuli can have a major impact on the mental and physical well-being of a person.

Studies have shown a high incidence of aphasia following ischaemic stroke and traumatic brain injury. No study could be found in the literature which documents the experiences of expressive aphasic patients during the acute care hospital setting.

Methods: A qualitative study was done on seven adult persons who, having suffered new onset expressive aphasia following brain injury, had presented to Worcester Hospital for acute care. At the time of the study these persons were able to communicate in an understandable manner in order to convey their past experiences. Interviews were transcribed and transcripts analysed by two independent researchers for findings to be triangulated.

Results: Participants were generally satisfied with the services of the health professionals. All participants described their families as being supportive, however even though most participants had attempted to initiate alternative forms of communication, none of their families reciprocated this. Physiological functioning e.g. sleep and appetite, were disrupted in some participants. First emotions upon realisation that they were expressive aphasic consisted of shock and sadness, with subsequent emotions of frustration and anger. Insight into the moral reasoning which participants used to evaluate their self-worth when determining their status of well-being and future plans, was gained.

Conclusion: Persons with new onset expressive aphasia during the acute care setting at Worcester hospital experience negative emotions as well as inadequate response by staff and visitors to their desire to use alternative forms of communication. Formal training in this regard is recommended for undergraduate as well as qualified health care professionals. Visitors to patients with expressive aphasia should be given basic instruction on the use of alternative communication.

‘Exploring existing capabilities amongst mentors in their role towards preventing Foetal Alcohol Spectrum Disorder (FASD) in a rural community’

Margo Beukes, Anita Boshoff, Marilise Maree, Julise Matthee

Prenatal alcohol exposure may lead to brain damage and interruption of foetal development. Occupational therapists’ interventions focus on growth abnormalities and developmental delay of individuals with FASD. Although FASD is preventable, it is incurable. One way in which occupational therapists could prevent FASD is to address the meaning and purpose of maternal alcohol consumption in general, but more specifically before and during pregnancy. This study followed up on previous work done by occupational therapists with particular focus on the limited body of knowledge with regards to the existing capabilities of mentors working within a mentorship programme that is focussed on FASD prevention.

Methodology: A Co-operative inquiry with qualitative features was used. Data was collected through individual semi-structured interviews, creative activities, focus groups and reflective journals. Two focus groups of two hours each and four individual interviews of one hour each were conducted. The data was analysed using inductive content analysis. Three rounds of data analysis were done to identify sub-categories, categories and themes.

Findings: Two themes were identified namely *Mentors shaped by their experiences, environment and a greater power* and *Preventing FASD by enabling the educated to become the educator*. The findings showed that mentors are shaped through their experiences, environment and a greater power which motivates them to strive towards fulfilling their role in their community as a mentor, support system and role model for mentees. The second theme stemmed from the first theme. By utilizing these capabilities the mentors are individually equipped to empower their own community through three strategies that were identified namely: education, teamwork within the mentorship programme and dynamic interaction with their rural community. The mentors utilized these three strategies in their attempt to establish sustainability of alcohol abstinence among mentees, using the mentorship approach towards preventing FASD in this rural community.

Conclusion: This study will contribute to the limited body of knowledge on the existing capabilities of mentors, who provide a supportive network for women in a rural community to abstain from drinking alcohol before, during and after pregnancy. More specifically, it will contribute to the development of a profile of a mentor for future recruitment purposes in areas where the mentorship approach is used for the prevention of FASD in a rural community.

**Determining students' experiences of their clinical learning environment in a South African academic hospital:
Validating an adapted questionnaire**

K. Kotze, E. Archer

The Clinical Learning Environment in health sciences forms an important and substantial part of curricula at the Faculty of Medicine and Health Sciences Stellenbosch University (FMHSSU). As part of the MBChB curriculum, a significant proportion of time is spent in various clinical settings, where students engage in a variety of different learning activities.

Currently, there is no system in place to determine student experience of the clinical learning as it occurs in the late rotation at FMHSSU.

Various instruments to evaluate clinical learning environments, but several also focus extensively on the clinical teacher and clinical teaching. None have conclusively been shown superior to others. One such instrument, based on another validated instrument, was successfully adapted and implemented at Uppsala University. This instrument has been selected for adaptation to the South African context, due to its focus on the clinical learning environment, reported previous successful implementation, and its brevity.

Objectives: To determine the validity and reliability of the Uppsala Questionnaire, in measuring student experience of clinical learning environment, after being adapted to suit the context of a South African Academic Hospital.

Method: To determine the validity of the proposed questionnaire, input from five clinical teaching experts was sought and collated into a final adapted questionnaire. The adapted questionnaire was also then sent to a group of medical students (n=16) who were asked to rate the relevancy each item on a Likert scale. The average rating for each question was then determined.

To determine reliability, anonymous responses from students (n=168) in their late rotation at FMHSSU were gathered on a variety of clinical rotations. Results were then analysed to determine the Cronbach's alpha for each question, as well as correlation between non-Likert scale questions.

Results: Expert feedback on face validity expanded the questionnaire from 10 items to 20, separating some of the original questions into more specific questions, and made several alterations to phrasing, as well as proposing new questions.

The mean rating for questions, by late rotation students was 4.58/6 (n=16), with a standard deviation of 1.3, indicating that students regarded the items as relevant, but that there was significant variance in responses.

Reliability determination, by means of the Cronbach's alpha, and factor analysis, is currently underway

The Nutritional Screening of Adult Patients on admission to Tygerberg Hospital, Western Cape, South Africa

Alexander M, Bold N, Potgieter J, Seager C.

Department of Human Nutrition, Faculty of Medicine and Health Sciences, Stellenbosch University and Tygerberg Academic Hospital

Nutritional Screening of patients on admission to hospital is not a standardised nor routinely conducted practice within the hospitals of South Africa. Malnutrition is associated with higher care complexity, more frequent hospital readmissions, longer length of stay and increased morbidity and mortality. The main objective of the study is to establish the prevalence and extent of and the risk for malnutrition in recently admitted patients as well as to determine differences between genders and disease states of at-risk patients, and the percentage of these patients referred for specialised nutritional support.

A descriptive, cross-sectional study with an analytical component was conducted on 405 adult patients in pre-specified wards in Tygerberg Hospital. Informed consent was obtained and data including medical, dietary, anthropometrical and clinical information was collected from patients admitted within 48 hours, by 10 fieldworkers. The completed data set was then transferred to a NRS-2002 screening tool to score the patients accordingly.

Study results indicate that 71.6% (n=290) and 59.8% (n=242) of the patients were at risk, and at high risk for malnutrition respectively. No significant difference between genders was observed ($p=0.17533$) in at risk patients but a significant difference was found between disease categories of at risk patients, with surgical patients presenting with the highest prevalence at 46.9% (n=136) ($p=0.0004$). Of the patients who were found to be at risk for and have malnutrition, only 2.1% (n=5) and 2.6% (n=9) respectively, were referred for specialised nutritional support.

A large percentage of patients admitted to Tygerberg, at risk to be, or already malnourished, are not identified and consequently not referred for specialised nutrition support. This reflects an unfulfilled need to prioritise intervention for malnutrition in the hospital setting, starting with appropriate, standardised nutritional screening.

Assessing childhood trauma history and anxiety in adults with Systemic Lupus Erythematosus (SLE): a case controlled study at Tygerberg Academic hospital.

HDV Louw¹, M Manie¹, C Lochner²

Introduction: Over the last few decades, many auto-immune diseases have been studied to assess if early childhood trauma or adverse childhood experiences can be regarded as an independent risk factor or contributory factor in the aetiology of these diseases. Among the diseases implicated include, multiple sclerosis, Graves' disease, alopecia areata and psoriasis.

Objective: To assess if childhood traumatic events are significantly increased in patients with SLE compared to healthy controls.

Methods: A case-control study was conducted in the Lupus clinic at Tygerberg Academic Hospital. The patients with SLE were subjected to a childhood trauma questionnaire-short form (CTQ-SF) as well as the Hamilton anxiety scale (HAM-A). Data was collected from 41 cases known with SLE (according to the 1997 ACR criteria). A total of 100 controls were appropriately selected from a database of healthy participants, who have recently participated in a study on anxiety at this academic institution.

Results: We found significant differences between the SLE and controls groups with respect to the subscales of traumatic events in the CTQ-SF. Emotional abuse ($p < 0,05$), physical abuse ($p < 0,05$), physical neglect ($p < 0,001$) and total childhood trauma reported ($p < 0,001$), was significantly increased in comparison to the control group. In the SLE group, the total anxiety (measured by the HAM-A) was significantly increased ($p < 0,001$) in comparison to the control group.

Conclusion: Based on the above findings, it appears that traumatic childhood events may indeed be associated with the development of SLE in later life.

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The Effectiveness of a “Traditional Exercise Program” Supplemented with Whole Body Vibration Compared to a “Traditional Exercise Program” Alone on Muscle Strength, Muscle Endurance, Balance and Functional impact/QoL in Adults with Fibromyalgia: A Systematic Review

J Alderman, MJ Carstens, H Malan, S Meiring, A Otto, JC Van Niekerk, E Van Niekerk

Fibromyalgia (FM) is an idiopathic and chronic rheumatic disorder, defined by persistent and widespread non-inflammatory musculoskeletal pain. FM patient’s activities of daily living (ADLs), work capacity and quality of life (QoL) are greatly affected by the disease. Whole body vibration therapy (WBV) is a new therapeutic approach that has been introduced for the management of chronic conditions. It has been suggested that WBV can offer additional benefits when compared to a “traditional exercise program” in patients with FM. Literature indicates controversy regarding the effect of supplementing a “traditional exercise program” with WBV versus a “traditional exercise program” alone for the treatment of FM patients. To date no systematic review (SR) has been undertaken on this topic.

Objectives: To critically appraise and evaluate the available evidence for the effectiveness of a “traditional exercise program” supplemented with WBV compared to a “traditional exercise program” alone on muscle strength, muscle endurance, balance and functional impact/QoL in adults with FM.

Methodology: The authors searched seven computerized bibliographical databases, namely; *CINAHL*, *Cochrane library*, *EBSCOhost*, *PEDro*, *PubMed*, *Science Direct* and *Scopus*. The search included articles from inception to June 2015. Articles had to meet specific inclusion/exclusion criteria to be included in this review. The methodological quality of each of the selected studies was appraised using the *PEDro* scale. The adapted “JBI Data Extraction Form” was used to extract data from the selected articles for the following aspects: citation, type of study, participants, interventions (treatment and control groups), outcome measures, results, as well as the clinical status post-intervention and the clinical implication thereof. Results are presented in narrative form and where applicable, statistical pooling was used.

Results: Four studies were included in this SR, and all were randomized controlled trials (RCTs) and obtained an average score of 6.25/10 on the *PEDro* scale. The pooled results showed that there was a statistically significant difference between the use of WBV and a “traditional exercise program” versus a “traditional exercise program” alone when measuring muscle endurance ($p<0.5$) in FM patients. Conflicting evidence regarding muscle strength was found and no statistical significance was proven ($p=0.72$). Two outcome measures were used to measure balance with open eyes ($p=0.33$ and $p=0.59$) and closed eyes ($p=0.87$ and $p=0.93$) and no statistically significant difference was found. When assessing QoL using FIQ, the pooled data showed no significant improvement ($p=0.26$) between the intervention and control groups, although one study measuring QoL with the Short Form 36 (SF-36) showed significant improvement ($p<0.05$).

Conclusion: There is level II evidence suggesting that the use of WBV as a supplement to a “traditional exercise program” is not more beneficial than a “traditional exercise program” alone in improving muscle strength, muscle endurance, body balance and QoL in patients with FM. This evidence is beneficial to the South African context as WBV is expensive to obtain. Further research in this field is recommended.

When students become patients: TB disease among medical undergraduates in Cape Town, South Africa

H van der Westhuizen^{1,3}, A Dramowski^{2,3}

Medical students in TB-endemic settings are at increased risk for latent TB. The burden and impact of TB disease in this population is unknown.

Methods: Medical students and recent medical graduates (n = 3500) at the Universities of Stellenbosch and Cape Town were invited via email and social media to participate in a cross-sectional survey. Students who developed TB disease (2010 – 2015) were eligible to complete a self-administered electronic questionnaire. Ethical clearance and institutional permission were obtained from the universities (Ref: S15/02/025; 331/2015).

Results: Twelve students (ten female) reported a diagnosis of TB disease during undergraduate training (minimum TB incidence of 340/100000). Disease spectrum included pulmonary TB (6), pleural TB (3), TB lymphadenitis (2) and TB spine (1). Two students had drug-resistant (DR-TB) disease. Mean diagnostic delay post-consultation was 11 weeks, with only 42% of initial diagnoses being correct. Most utilized private healthcare providers (general practitioners [7]; pulmonologists [4]) and nine underwent invasive procedures (bronchoscopy, pleural fluid aspiration and tissue biopsy). Substantial healthcare costs were incurred (up to R25000 for drug-sensitive TB, R104000 for DR-TB); few students had comprehensive medical aid cover. TB treatment was mostly obtained from government clinics, incurring large transport costs and missed academic time. Students with DR-TB interrupted their studies and experienced severe side effects (hepatotoxicity, depression and permanent ototoxicity). Most students cited poor TB infection control (TB-IC) at the training hospitals as major risk factor for occupational TB. Although the experience of TB disease increased students' empathy with patients, they reported feeling greater vulnerability in the clinical environment.

Conclusions: Undergraduate medical students in Cape Town are at high risk of occupationally-acquired TB disease. Students report poor implementation of TB-IC as a major risk factor. Comprehensive institutional support for students who develop TB disease is needed, including free screening, diagnostic services and treatment

Assessment of Risk of Malnutrition in Hospitalised Children in Tygerberg Hospital, Western Cape using The STAMO Screening Tool.

N. Erasmus, M. Jamieson, A. Lenhoff, Z. Zhang

Prof R. Blaauw

Many children admitted to hospital are at risk for developing malnutrition. Malnutrition amongst children influences their growth, development, and is associated with worse clinical outcome. There is lack of research on the risk for malnutrition in hospitalised children in South Africa. The main aim of this study was to identify and assess the prevalence of the risk of malnutrition on admission of paediatric patients in Tygerberg hospital, Western Cape. The objectives are: to determine the prevalence of the risk for malnutrition on admission in hospitalized children; to determine the percentages of children identified as high risk for malnutrition that were referred for appropriate nutrition intervention; to describe the difference in malnutrition prevalence between various medical conditions.

A cross-sectional observational study with an analytical component was conducted in Tygerberg hospital. A sample size of 100-150 participants was estimated based on average admission rate of relevant wards in Tygerberg Hospital. Baseline data, medical diagnosis, anthropometrical data and nutritional intake were recorded during the first 48 hours of admission. The Screening Tool for the Assessment of Malnutrition in Paediatrics (STAMP) was used to calculate overall malnutrition risk.

A total of 152 paediatric patients with median age of 6.26 years were included in the study. The percentage of children with high, medium and low risk were 49(32.2%), 90(59.2%) and 13(8.6%) respectively. 7(28%) of children at high risk for malnutrition have previously received nutritional intervention. In the disease diagnostic categories: general medicine, surgery, oncology and other there were 53, 72, 19 and 8 patients respectively. Oncology patients had the highest percentage for high overall risk (68%).

A high percentage of children admitted to Tygerberg Hospital exhibit risk of malnutrition. Nutritional risk screening on admission and routine monitoring of paediatric patients identified as at risk for malnutrition should be carried out in all hospitals, South Africa.

A Tangled Web of Definitions: Deconstructing Health Science Students' Concept of Research – A Qualitative Approach

J. Bovijin, N. Kajee

S. van Schalwyk

The future of medicine rests on the development of new research and innovation. Today's health science students will form the backbone of tomorrow's medical community. Thus developing a rich understanding and culture of research is paramount to achieving this academic progress. Furthermore, learning to conduct research and engage in scholarly activities are valuable skills for undergraduate health science students to acquire as part of their undergraduate training. To do so, however, it is essential that we understand how students perceive the notion of research. This can enhance educators' pedagogic decisions, specifically those relating to removing research educational barriers and enhancing engagement within the ambit of research. The literature abounds with numerous definitions of research. This study aims to examine the manner that undergraduate health sciences perceive the concept of research.

Method: A sample of 1815 Health Sciences students of the Faculty of Medicine and Health Sciences at Stellenbosch University were surveyed as part of a cross-sectional study. The written questionnaire included a qualitative aspect examining the students' definition of research. This qualitative data was analysed using the framework analysis method.

Results: In keeping with the literature, the students' responses demonstrated a wide range of perceptions, although respondents leaned largely towards a positivist understanding of research. The gaining of information, knowledge and understanding were central to the definition of research amongst students. A mechanistic approach was displayed by a sub-group of respondents. Few cited the need for and progressive purpose of research.

Conclusion: This study has explored the perceptions of research among health science students. It suggests that these perceptions are incomplete and highlights areas of misconception. This creates a platform for optimised pedagogy and institutional policy in supporting the research student experience.

The relationship between bed height to leg length ratio as a possible risk factor to falls in older adults in residential care facilities.

N Hanekom, L Van Jaarsveld, L Viljoen & L Zietsman

Objective: The main objective of the study was to determine the relationship between incidence of falls and the bed height to leg length ratio in older adults in residential care facilities in the Cape Metropole and Helderberg region. This includes investigating the average height of the bed and the average leg length of the older adults.

The secondary objective of the study was to determine the incidence of falls and possible causes (confounders) of falls among older adults in residential care facilities in the Cape Metropole and Helderberg region.

Methods: This causal-comparative quantitative research study was conducted on 78 older adults, above the age of 65. The study was conducted in 5 different residential care facilities from different socio-economic backgrounds, in the Cape Metropole and Helderberg region. The data collection process took place in 2 phases. Phase 1: Gathering quantitative data by means of a questionnaire and Phase 2: Gathering observational data by measuring the bed height and leg length. The participants were divided into two comparison groups, namely residents with a history of bed-related falls and residents with no history of bed-related falls (6). The group with no history of falls were used as the control group.

Findings: The P value of the ratio between leg length and bed height to the risk of falls was $P=0.19$ and thus larger than $P=0.05$. No association can be made between the risk to falls and the bed height to leg length ratio. The study also found that the following confounders had a P value smaller than $P=0.05$: gait problems, drop attack, confusion, visual impairments, assistive devices, an adjustable bed height and any contributing environmental problems and thus an association can be made between these confounding variables and the risk to fall.

Conclusion: The current study could find no significant influence of the bed height to leg length ratio on an older adults' risk to fall, in residential care facilities, in the Cape Metropole and Helderberg region. This findings can however not be generalized on the South African or Western-Cape population but represent the phenomena that occurred in the Cape Metropole and Helderberg region. This is however in contrast with the current tendency that suggests that an abnormal bed height to leg length ratio is a risk factor to falls in older adults.