



UNIVERSITY OF NAMIBIA

Faculty of Health Sciences and Veterinary Medicine

Health Africa International Conference(HAIC) 2025

*Theme: Prioritizing Healthcare
Through Research*

12 – 13 March 2025

PROCEEDINGS & BOOK OF ABSTRACTS

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Executive Director,
Faculty of Health Sciences and Veterinary Medicine.

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Faculty of Health Sciences & Veterinary Medicine,
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Mr Filippus Tshavuka
Technologist:
Human, Biological & Translational Medical Sciences,
School of Medicine

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PROGRAMME FOR RESEARCH CONFERENCE

DAY 1: 12 MARCH 2025

Time	Presenter	Presentation Title	
https://teams.microsoft.com/join/19%3ameeting_MWMwZjgyOWltYzVIMy00NjdmlWFiZTctOTI0ZWZiZDVhZTFh%40thread.v2/0?context=%7b%22Tid%22%3a%22bed168de-93cf-4c3a-bc0a-65cece183d19%22%2c%22Oid%22%3a%22ccc62df6-8854-4031-9cdd-61688836c9df%22%7d			
Facilitators: Dr Albertina Shatri & Prof Judith Hall			
Time	Presenter	Affiliation	Title of presentation
0900 – 0915	Prof Dr Judith Hall	Executive Dean – Faculty of Health Sciences & Veterinary Medicine, University of Namibia	Welcome remarks
0915 – 0945	Prof Dr Daniela-Cristina Stefan	PVC: RID University of Namibia	Official opening of the conference
0945 – 1015	Prof Dr Kenneth Matengu	Vice Chancellor – University of Namibia	Launching of the 2024 HAI Conference Book of Abstracts
1015-1030	Dr Thomas Nyirenda (Keynote speaker)	Head of Africa Office European & Developing Countries Clinical Trials Partnership (EDCTP) Medical Research Council, Francie van Zijl Drive, Parow. INTERNATIONAL.	Opportunities and challenges of building clinical research capacities in Africa with the global context
SESSION 1. INFECTION, INFLAMMATION & IMMUNOLOGY AND ONE HEALTH RESEARCH			
Teams Room 1: Facilitator- Dr. Bere, Silas Kudakwashe			
Time	Author list	Affiliation	Title of presentation
1030 – 1040	Nangombe Vulika ^{1*} , Amkongo Mondjila ² , Godman Brian ^{3,4,5} , Kibuule Dan ⁶	¹ School of Pharmacy, University of Namibia, Box 13301, Windhoek, Namibia. ² School of Allied Health Sciences, Box 13301, Bach Street, Windhoek, Namibia. ³ Strathclyde Institute of Pharmacy and Biomedical Sciences, University of Strathclyde, Glasgow G4 0RE, United Kingdom. INTERNATIONAL. ⁴ School of Pharmacy, Sefako Makgatho Health Sciences University, Pretoria, South Africa. INTERNATIONAL. ⁵ School of Pharmaceutical Sciences, Universiti Sains Malaysia, Penang, Malaysia. INTERNATIONAL.	Drug Resistant-TB Treatment Success Predictors in Namibia

		⁶ Department of Pharmacology and Therapeutics, Faculty of Health Sciences, Busitema University, Mbale City, Uganda. INTERNATIONAL.	
1040 – 1050	D. Wylie ¹ , J.J. Du Toit ¹ , L. De Villiers ^{1*}	¹ Department of Companion Animal Clinical Studies, Faculty of Health Sciences & Veterinary Medicine, University of Namibia, Windhoek, Namibia	Identification of canine ehrlichiosis and babesiosis using light microscopy at the UNAM Veterinary Academic Hospital, Khomas, Namibia
1050 – 1100	A. N. Haifete ^{1,2*} , P. Brysiewicz ¹	¹ Discipline of Nursing, School of Nursing and Public Health, Faculty of Health Sciences, University of KwaZulu-Natal. INTERNATIONAL. ² Department of Community and Mental Health Nursing, School of Nursing and Public Health, Faculty of Health Sciences and Veterinary Medicine, University of Namibia	Prevalence of surgical site infection and its associated factors among patients in surgical wards, Windhoek, Namibia
1100 – 1110	E.N. Abner * K.H. Mitonga	Department Public Health, Faculty of Health Sciences & Veterinary Medicine, University of Namibia, Oshakati, Namibia	Pre-exposure prophylaxis low uptake associated factors among pregnant women attending antenatal care at Intermediate Hospital Katutura
1110 - 1120	Colin Musara ¹ and Frank Kapungu ²	¹ Veterinary Preclinical Department, School of Veterinary Medicine, Faculty of Health Science and Veterinary Medicine, Windhoek, Namibia ² Department of Preclinical Veterinary Studies, University of Zimbabwe, P.O. Box MP167, Mount Pleasant, Harare, Zimbabwe. INTERNATIONAL.	Evaluation of whey for extraneous components in fermented milk
1120 - 1130	Olga Shavuka ¹ , Lusia Mhuulu ¹ , Viola Dreyer ^{2,6} , Hilya Ekandjo ¹ , Clayton Ipinge ³ , Patrick Absai ³ , Nunurai Ruswa ⁴ , Tanja Niemann ^{1,2,6} , ⁵ Emmanuel Nepolo ¹ , Mareli Claassens ¹ , Gunar Günther ^{1,5} , Stefan Niemann ^{1,2,6}	¹ Department of Human Biological & Translational Medical, Faculty of Health Sciences & Veterinary Medicine, University of Namibia, Windhoek, Namibia ² Research Center Borstel - Leibniz Lung Center, Germany. INTERNATIONAL. ³ Namibia Institute of Pathology ⁴ National Tuberculosis and Leprosy Program, Ministry of Health and Social Services, Namibia. ⁵ Department of Pulmonology and Allergology, Inselspital, Bern University Hospital, University of Bern, Bern, Switzerland. INTERNATIONAL. ⁶ German Center for Infection Research (DZIF), Partner Site	Population structure and transmission analysis of drug-resistant Mycobacterium tuberculosis strains from Namibia using whole Genome Sequencing

		Hamburg-Lübeck-Borstel-Riems, Borstel, Germany. INTERNATIONAL.	
1130 – 1140	A. Shoolongela ¹ , C. Ntahonshikkira ¹ , & S. Kawaji	¹ School of Veterinary Medicine, Faculty of Health Sciences & Veterinary Medicine. ² Research Division, National Institute of Animal Health, National Agriculture Food Research Organization, Ibaraki, Japan. INTERNATIONAL.	Screening of Bovine Paratuberculosis in Namibia, Case study of Neudam Farm.
1140 - 1150	E. lipumbu ¹ , G. Hoddinott ² , J. Seddon ³ , M. Claassens	¹ Faculty of Health Sciences & Veterinary Medicine, University of Namibia, Windhoek, Namibia ² School of Public Health, The University of Sydney, Sydney, Australia. INTERNATIONAL. ³ Imperial college, London, UK. INTERNATIONAL.	Understanding family structures and exposure patterns among DR-TB Patients in Namibia
1150 – 1200	Youssef Saad ¹ , Gadalla Nancy ² , Saad Sandra ³ , Boikanyo Augusta ⁴	¹ Department of Surgical Sciences, School of Medicine, Faculty of Health Sciences & Veterinary Medicine, University of Namibia, Windhoek, Namibia	A rare case of isolated active hydatid cyst (Echinococcus)infestation in a 16-years-old in a thyroid gland
1200 - 1210	Boois L ¹ , Burkhardt I ² , Anyolo K ³ , Marufu T ³ , Ruswa N ⁵ , Shavuka O ¹ , Katali O ¹ , Usiku P ¹ , Mhuulu L ¹ , Ekandjo H ¹ , Nepolo E ¹ , Niemann S ⁶ , Günther G ^{1,3,4}	¹ Research Group for Infectious Diseases, University of Namibia, Windhoek, Namibia ² Faculty of Medicine, University of Bern, Bern, Switzerland. INTERNATIONAL. ³ TB-Ward, Katutura Intermediate Hospital, Windhoek, Namibia ⁴ Department of Pulmonology, Inselspital, Bern, Switzerland. INTERNATIONAL. ⁵ National Tuberculosis and Leprosy Programme, Ministry of Health and Social Services (MOHSS), Windhoek, Namibia ⁶ Research Center Borstel, Schleswig-Holstein, Germany. INTERNATIONAL.	Advances and challenges in the management of extensively Drug-Resistant tuberculosis in rural Africa: A case study.
1210- 1220	Justine Heita, Hans Amukugo	Department of Public Health, School of Nursing and Public Health, Faculty of Health Sciences and Veterinary Medicine, University of Namibia, Oshakati campus, Namibia	Factors Associated with Covid-19 Vaccine Hesitancy Amongst University of Namibia Students, Main Campus, Khomas Region, Namibia.
Lunch Break			

Update of previous FHSVM research funding for 2024.		
https://teams.microsoft.com/l/meetup-join/19%3ameeting_MWMwZjgyOWItYzVIMy00NjdmLWFiZTctOTI0ZWZiZDVhZTFh%40thread.v2/0?context=%7b%22Tid%22%3a%22bed168de-93cf-4c3a-bc0a-65cece183d19%22%2c%22Oid%22%3a%22ccc62df6-8854-4031-9cdd-61688836c9df%22%7d		
Facilitators: Dr Albertina Shatri & Prof Judith Hall		
Time	Author list	Title of presentation
1400 – 1410	Alicia Fernandes, Clifford Hlatywayo, Joanne Marshal	The mediating effect of spirituality on mental health, psychological empowerment, and workplace agility: The case of Namibian high school teachers
1410 – 1420	Albertina Shatri, Denise Bouman, Naugwe Simasiku	Evaluating the <i>anti-H. pylorus</i> and cytotoxicity properties of SCP-based-PLGA nanoparticles using gastric adenocarcinoma epithelial cells
1420 – 1430	Albertina Shatri, Ingenesia Tjiurutue, Naugwe Simasiku	Biosensing and Anti-Inflammatory Effects of Silver Nanocarriers of <i>Cyperus papyrus</i> and <i>Lantana camara</i> : A Potential Therapy for Chronic Obstruction Pulmonary Disease and Crohn's diseases.
1430 – 1440	Antonette de Almeida, Karlien Burger, Research Bhavna Bahgoo and Fiona Breytenbach	Exploring Communication Amongst the Multidisciplinary Team for Adult Neurological In-Patients In Namibian State Hospitals
1440 – 1450	Dainess Z Amukwelele and Annelisa Murangi	An exploratory study on caregivers 'mental health readiness during children reintegration in Namibia's Khomas, Oshikoto and Oshana regions.
1450 – 1500	Fasika T Yimer, P. Kioko Ngalyuka, Ndaudanekelwa S. Hapulile, Tirumebet M. Minayehu, Zelra Malan, Felicia Christians, Ndawapeka Tulonga Nhinda, Regina Msanga, Laina Sahombo	Prevalence rate of treatment non-adherence, glycemic control and associated factors among diabetic outpatients in Namibia: A cross-sectional study integrated with retrospective Lab data.
1500 – 1510	Filippus I. Tshavuka, Katrina Niiteta, Emmanuel Nepolo	Targeted Next-Generation sequencing of acute lymphoblastic leukemia patients to identify clinically significant mutations for targeted therapy: a cross-sectional study.
1510 – 1520	Rebekka N Gabriel, Dr. Tuwilika Endjala, Monika Nakweenda, Dr. Anna Alfeus, Edith Hamukwaya, Dr. Maria Yvonne Hemberger	One Health Approach: A Perspective of Health Workers in Khomas Region, Namibia.
1520 – 1530	Mattheus Hanghomem, Borden Mushonga – Senior Researcher, Maria	Assessment of heavy metal contamination in livestock drinking water of Neudamm Farm, Namibia", under the theme One Health, Heavy Metals.

	Amukwaya, Urban Ujava		
1530 – 1540	Martha Kampanza, Irene Brinkmann, Lauren Jonkman	Identifying the prevalence of tobacco use and the desire to out smoke in patients with cardiovascular and respiratory diseases in patients admitted at intermediate Katutura Hospital	
SESSION 2. INDIGENOUS KNOWLEDGE, NOVEL MOLECULES & HEALTH EDUCATION			
Teams Room 2: Facilitator_ Prof Khaiseb Siegfried			
Time-	Author list	Affiliations	Title of presentation
1030 – 1040	Professor VE Matahela ^{1 *}	¹ Department of Health Studies, School of Social Sciences, College of Human Sciences, University of South Africa, Pretoria, South Africa. INTERNATIONAL.	Ubuntu Philosophy as a Transformative Pedagogical Approach for Advancing Planetary Health in Nursing Education
1040 – 1050	Shatri A.M. N ^{1*} , Silas K. Bere ² , D. Bouman ¹ , Mumbengegwi D. R ³	¹ School of Medicine, Hage Geingob Campus, University of Namibia, Windhoek ² School of Dentistry, Hage Geingob Campus, University of Namibia, Windhoek ³ Center for Research and Innovation, University of Namibia, Windhoek	Antimicrobial, time-kill kinetics and biofilm inhibition properties of <i>Diospyrus lycioides</i> that is used as a chewing stick in Namibia
1050 - 1100	R.T Maundu ^{1*} S. Gentz ¹ , T Bartholomew ²	¹ Department of Psychology and Social Work, Faculty of Health Sciences & Veterinary Medicine, University of Namibia, Windhoek, Namibia ² Department of Psychology and Department of Africana Studies, Scripps College, United States. INTERNATIONAL.	An exploration of the understanding of mental health: A case study of the Ovaherero community, Opuwo urban area, Namibia.

SESSION 3. GLOBAL HEALTH			
Room 3: Facilitator_ Filippus Tshavuka			
Break			
1030 – 1040	E.S. Hamukwaya ¹ , H.J. Amukugo ¹ , S.K Coetzee ²	¹ Faculty of Health Sciences & Veterinary Medicine, University of Namibia, Windhoek, Namibia ² Department of Nursing, Faculty of Health Sciences, Northwest University, Potchefstroom, South Africa. INTERNATIONAL.	Perspectives of families on quality of healthcare in the intensive care unit: a qualitative study
1040 – 1050	W. Akwaake, T. Munangatire, L. Nghifikwa	Faculty of Health Sciences and Veterinary Medicine, University of Namibia, Windhoek, Namibia	Motor vehicle accident victims care patterns at health facilities in Otjozondjupa region
1050 – 1100	W. Akwaake, T. Munangafire, L. Nghifikwa	Department of Human Biological & Translational Medical, Faculty of Health Sciences & Veterinary Medicine, University of Namibia, Windhoek, Namibia	Development of strategies to enhance the delivery of health facility- based emergency medical care for motor vehicle accident victims on admission at health facilities in Otjozondjupa region, Namibia.
1100- 1110	K. Rajzman ¹ , L. De Villiers ^{1 *}	¹ Department of Companion Animal Clinical Studies, Faculty of Health Sciences & Veterinary Medicine, University of Namibia, Windhoek, Namibia	Identification of canine parvovirus infection in domestic dogs and the influence of co-infection with canine ehrlichiosis on clinical outcome at the UNAM Veterinary Academic Hospital

ALL PRESENTERS FOR EOIs TO PRESENT PHYSICALLY

Venue: Library first floor, Computer Room			
https://teams.microsoft.com/l/meetup-join/19%3ameeting_MWMwZigyOWItYzVIMy00NjdmLWFiZTctOT0ZWZiZDVhZTFh%40thread.v2/0?context=%7b%22Tid%22%3a%22bed168de-93cf-4c3a-bc0a-65cece183d19%22%2c%22Oid%22%3a%22ccc62df6-8854-4031-9cdd-61688836c9df%22%7d			
Facilitators: Dr Albertina Shatri & Prof Claassens Mareli			
Time	Presenter	Affiliation	Title of presentation
0900 – 0915	Prof Judith Hall	FHSVM, University of Namibia	Official opening Day 2
0915 – 0945	Dr Beth Mills (Keynote speaker 2)	Translational Healthcare Technologies, Centre for Inflammation Research, Institute for Regeneration and Repair, University of Edinburgh, Edinburgh. INTERNATIONAL	Improving outcomes for patients with Microbial Keratitis: an ecosystem approach
0945 – 1015	Prof Nepolo Immanuel (Keynote speaker 3)	Department of Human, Biological & Translational Medical Sciences Hage Geingob Campus, School of Medicine	Defending Against TB: What genomics brought to the knowledge of Tuberculosis in Namibia
EOI PRESENTATIONS			
Time	Presenter	Topic	Type of presentation
1015 – 1030	Chilwalo- Masule N. B		EOI
1030- 1045	Pia Simeon , Shatasha Fuller, Nunurai Ruswa, David Hachey, Lauren Jonkman, Christian Hunter	Confidential	EOI
Break			
1200 – 1215	Penny Hiwilepo-Van Hal, Kristofina Mwaningange , Urban Ujava, Vicky Muteze	Confidential	EOI
1230 – 1245	Maria Namene , Selma Ingandipewa Uushona, Mondjila Amkongo	Confidential	EOI
1330- 1345	Annelisa Murangi and Zeldah Rukambe, Dainess Amukelele	Confidential	EOI
1400 – 1415	Nyaradzai Munambah, Matthew Chiwaridzo, Karlien Burger	Confidential	EOI
1430 – 1445	Mareli Claasens. Sibela G. Sinvula , Laina N. Absalom, Festus Mbangu, Victor Haimbala, Loide Ngolombe	Confidential	EOI
1500 – 1515	Charles Ntahonshikira, Abraham Shoolongela , Yvonne Hemberger	Confidential	EOI



Prioritizing Healthcare Through Research – Africa's Path to a Healthier Future

We live in a rapidly evolving world where disruption has become the norm: a new environment, new ideas, waves of uncertainty about the future and our idealistic goals: everything can change on the spur of the moment.

In this world, the need for health remains constant and it seems more and more difficult to achieve. The need for equity and reducing inequalities across the globe remains just as strong even if not more than before. The need to prioritize health care and health care through research is the core of this year's conference.

The need for strong, evidence-based healthcare solutions has never been greater.

Across Africa, health systems are at a crossroads, facing persistent challenges such as the growing burden of infectious diseases, non-communicable diseases (NCDs), antimicrobial resistance, climate-related health threats, and health inequities. Yet, within these challenges lies an extraordinary opportunity—the opportunity to harness African-led research and innovation to transform healthcare on the continent and beyond.

This is the driving force behind the Health Africa International Conference 2025, themed "Prioritizing Healthcare Through Research."

This conference is not just a conference but serves as a global platform for researchers, policymakers, healthcare professionals, and thought leaders to exchange ideas, share breakthroughs, and forge partnerships that will redefine so much needed healthcare in Africa.

Research is not just the Engine of Healthcare Transformation. Research is not just an academic pursuit—it is a catalyst for change, a driver of policy, and a tool for saving lives. Without research, healthcare systems operate in the dark, relying on guesswork rather than data-driven decisions. Africa cannot afford to lag in scientific discovery; instead, we must position ourselves at the forefront of innovation, leading efforts in disease prevention, treatment, and health system strengthening.

Historically, Africa has been seen as a recipient of global health solutions rather than an originator of them. This must change and we are the spectators of major changes in the world. If we want it or not, that is happening!

We need African-driven, African-led research that is rooted in our unique health challenges, our communities, and our lived realities.

Institutions such as the University of Namibia (UNAM) and the Faculty of Health Sciences are playing a crucial role in this transformation—by training the next generation of scientists,

nurses, doctors, and public health experts who will drive research that directly benefits African populations.

A Call to Action: Investing in Research for a Healthier Africa

As an African professor in oncology and global health I strongly believe that Africa needs to prioritize healthcare through research but at the same time we must: acknowledge the need for transformation, to begin changing the entire narrative of African research starting with our students, strengthen collaborations between universities, governments, and the private sector, invest in research infrastructure to support groundbreaking discoveries.

Ensuring equitable funding for African researchers to lead their own projects is just as pivotal as for translating research into policy and practice to making a real impact on healthcare delivery.

The Future of Healthcare in Africa is in Our Hands, our African hands at times still shaking but creative, powerful and in full touch with the current reality.

This conference is not just about sharing knowledge—it is about mobilizing action. It is about recognizing that Africa's future in healthcare is not something to be decided elsewhere—it is ours to shape.

By prioritizing research, we can build a continent where healthcare is not a privilege but a right, where innovation thrives, and where Africa takes its rightful place as a leader in global health.

Let us move forward together—with curiosity, courage, and a commitment to excellence. The future of healthcare in Africa depends on what we do today.

Welcome to the Africa Health International Conference 2025.

Prof Dr D Cristina Stefan

KEYNOTE SPEAKER 1

i. Enablers for enhancing postgraduate throughput

Dr. Thomas Nyirenda

Strategic Partnerships and Capacity Development Manager – Head of Africa Office
European & Developing Countries Clinical Trials Partnership (EDCTP)
Medical Research Council, Francie van Zijl Drive, Parow



Email: nyirenda@edctp.org

Biography

Dr Thomas Nyirenda is a physician with experience in planning and implementing community disease control programs, operational research and clinical trials in Africa. He worked with the Ministry of Health in Malawi from 1993 to 2000 where he gained experience in administration of district, national health delivery systems and in health research. From 2000 to 2004 he worked for the World Health Organisation as a national and international technical advisor in control and research of TB and TB/HIV co-infection in Africa. He has published and contributed to several publications in this field including malaria. He joined EDCTP in 2004.

Key words

Clinical trials, Africa, TB/HIV co-infection

ii. Improving outcomes for patients with Microbial Keratitis: an ecosystem approach

Dr Beth Mills

Translational Healthcare Technologies, Centre for Inflammation Research
Institute for Regeneration and Repair
University of Edinburgh
4-5 Little France Drive, Edinburgh EH16 4UU



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Biography

Beth was awarded her PhD in Molecular Microbiology from the University of Nottingham. She subsequently joined the EPSRC IRC Proteus project and Translational Healthcare Technologies group at the University of Edinburgh, where she led infection model development and the validation of optical SmartProbes and imaging devices for clinical translation in pulmonology. In 2017 Beth started investigating how such technologies could be adapted for point-of-care diagnosis of infection, considering technological, user and health system requirements in low-resource settings, with a particular focus on microbial keratitis (corneal ulcer). Beth concurrently undertook an MSc in Global Health and Public Policy at the University of Edinburgh to augment these endeavours. Beth began her UKRI Future Leaders Fellowship in 2022 to develop pathways to diagnose, treat and reduce the burden of microbial keratitis in India, with project partner Aravind Eye Care System. The research approach is two-fold, exploring both bottom-up (molecular characterisation of the disease pathways, modelling microbial keratitis) and top-down (health-system and patient care pathway mapping) methodologies to drive fundamental insight into the disease. This is enabling development of appropriate diagnostic and treatment tools and strategies within the Indian context.

Key words

Microbial Keratitis, corneal ulcer, ecosystem

iii. Defending Against TB: What genomics brought to the knowledge of Tuberculosis in Namibia

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Biography

Emmanuel is an Associate Professor and a Biomedical Research Scientist at the University of Namibia, School of Medicine. He dedicated his professional and scientific research work on the training, laboratory infrastructure development and application of sequencing technology to fight against resistant tuberculosis and other pathogens of public health interests such as COVID-19, Malaria and HIV/AIDS. His research focuses on national transmission dynamics, resistance prediction of TB using sequencing technologies in high TB incidence countries for individualized therapies. He is a Namibian PI and co-PI of numerous research studies in Namibia, namely, EDCTP2_PANGenS (Pan-Africa network for genomic surveillance of poverty related diseases and emerging pathogens), Global Health Protection Program, (Global Sub-Saharan African Network for genomic diagnostics and surveillance on lung pathogens), EDCTP2-STATIN TB for the proof-of-concept phase IIB, double-blind, randomized, placebo controlled trial to evaluate the safety and efficacy of pravastatin to reduce persistent lung inflammation after successful TB treatment completion in HIV-infected and HIV-uninfected adults measured by PET/CT. His focus is to improve research implementation gaps by bringing the laboratory bench research to the bedside in the hospital and the community through participatory and community engagement approaches, in conjunction with state-of-the-art diagnostics and other technologies. Emmanuel has strategic collaborations with internationally renowned institutions in South Africa, Botswana, Ghana, Mozambique, Eswatini, Germany, Switzerland, United Kingdom, USA, and Canada. He has worked with institutions such as the Africa CDC, Robert Koch Institute, the Max Planck Institute of Biochemistry, B. C Centre for Excellence in HIV/AIDS, Vancouver, Canada, Stellenbosch University and University of Cape Town, South Africa.

Key words

Tuberculosis, genomics, Drug-Resistant TB

iv. Drug Resistant-TB Treatment Success Predictors in Namibia

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Abstract

Background: Drug resistant tuberculosis (DR-TB) is a considerable barrier to ending TB globally by 2035. In most high TB burden countries in the Sub-Saharan region, drivers of treatment DR-TB success are unknown. Consequently, the study aimed to determine predictors and patterns of treatment success rates (TSR) in DR-TB in Namibia to inform strategies of national TB programs.

Methods: A nationwide retrospective observational cohort study of a six-year DR-TB database, 2014-2019, was carried out. Independent predictors of successful treatment outcome in DR-TB were determined by multivariate logistic regression.

Results: Of the 1494 DR-TB patients included, 56.3% (n=841) were male, the mean age was 35.6±14.2 years, and 8.3% had TB/HIV coinfection. The overall TSR was 66.5% (n=994) and it increased marginally between implementation of the 2nd and 3rd medium term plans (MTP-II and MTP-III). Being female was associated with lower odds of treatment success (aOR=0.6, 95% CI:0.34-0.89; p=0.015), as was a young age (under 5 years) (aOR=0.1, 95% CI: 0.0007-0.421; p=0.005), and ages 5-14 years (aOR=0.0; 95% CI: 0.002-0.269; p=0.002). Namibian nationality also showed a reduced likelihood of treatment success (aOR=0.3; 95% CI:0.089-0.961; p=0.043). Among clinical predictors, bilateral pulmonary forms were inversely associated with treatment success (aOR=0.2, 95% CI: 0.057-0.498; p=0.001). Conversely, baseline mono-resistance was linked to an increased likelihood of treatment success (aOR=7.6, 95% CI: 1.427-40.631; p=0.018).

Conclusion: Whilst DR-TB TSRs improved, they are below global target and vary by clinical and patient demographics. Targeted interventions for high-risk patients, including females, age under 15, locals, and those with bilateral pulmonary disease using community-based approaches to boost adherence alongside leveraging the skills of clinical pharmacists should now be explored.

Key words: Drug-resistance; Tuberculosis; Predictors; Treatment

v. **Pre-exposure prophylaxis low uptake associated factors among pregnant women attending antenatal care at Intermediate Hospital Katutura**

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Abstract

Background: The research sought to examine the factors that influence the adaptation of Pre-Exposure Prophylaxis (PrEP) and to assess HIV risk perception, awareness, and acceptability of PrEP among pregnant women attending antenatal care (ANC) at Intermediate Hospital Katutura.

Methods: Employing a mixed methodology, the research objectives were addressed through both quantitative and qualitative approaches. The first two objectives, which sought to identify factors associated with PrEP uptake and assess HIV risk perception, were addressed using a structured questionnaire administered to a sample of 150 pregnant women selected through simple random sampling. The third and fourth objectives, focusing on the perceptions of awareness and acceptability of PrEP, were explored through an interview protocol with participants selected using purposive sampling.

Results: The interviews provided in-depth insights into the participants' understanding of PrEP, the impact of societal and cultural beliefs, as well as the perceived backing from healthcare providers and partners. Major obstacles to the adaptation of PrEP, such as social disapproval, potential side effects, and misinformation, were also identified. The results suggest the need to boost awareness initiatives and improve training of healthcare professionals, develop support programs involving partners and families, address financial barriers to PrEP access, and focus on rural-urban disparities. Additionally, efforts to reduce stigma and address cultural beliefs and misinformation are crucial.

Conclusion: The findings revealed significant associations between PrEP uptake and various demographic and socio-economic factors, highlighting the importance of comprehensive educational interventions and proactive healthcare provider engagement. Monitoring and evaluating PrEP programs and outcomes are essential to ensure continuous improvement and effectiveness.

Keywords: PrEP uptake, HIV risk perception, PrEP awareness, PrEP acceptability.

vi. **Prevalence of surgical site infection and its associated factors among patients in surgical wards, Windhoek, Namibia**

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Abstract

Background: Surgical site infection is among the most common healthcare-associated infections globally. It refers to any incisional infection occurring within 30 days of operation or within 1 year in the event of an implant. Healthcare-associated infections are one of the most severe threats to patients' health and remain a major challenge globally. The study aimed to determine the prevalence of surgical site infection and its associated factors among patients in surgical wards who underwent a surgical procedure in Windhoek, Namibia.

Methods: The study was conducted in two state hospitals, in Windhoek, Namibia. A quantitative, hospital-based cross-sectional study design used a retrospective chart review for patients underwent surgical procedures from March 2019 to February 2021. Sample size of 1248 patients' records were divided equally into 4 time periods, 2 periods for each hospital (1248 divided by 4 periods=312); thus, a systematic sampling method for March 2019 to February 2020 and March 2020 to February 2021 patients' charts were used for each hospital.

Results: All selected files were traced at both sites, however the following variables had missing data namely; amount of blood loss (77%), wound classification (86%), American Society of Anesthesiologists Physical Status Score (23%), order for wound care (17%) and, orders showing how often to clean the wound (59%), wound care charted as ordered (49%). Also, duration of anaesthesia (6%) and antibiotic prophylaxis (24%). The overall prevalence of surgical site infection was 126/1248 (10.1%); Hospitals 1 and 2 had a prevalence of 72 (11.5%) and 54 (8.7%) respectively. Factors associated with surgical site infections were found to be age group 31-60 years, male patients, postoperative hospital stays ≥ 5 days, emergency surgery, abdominal and lower extremity surgeries, operation referred from other hospitals, previous history of surgery, and deceased patients. Diabetes mellitus, HIV/AIDS, cancer/malignancy, and multiple comorbidities were also among the factors.

Conclusion: The prevalence of surgical site infection in this study remains high, and therefore, context-based interventions should focus on the factors identified to guide effective patient management.

Keywords: Prevalence; surgical site infection; surgical in-patients; surgical wards; Namibia.

vii. **Population structure and transmission analysis of drug-resistant *Mycobacterium tuberculosis* strains from Namibia using whole Genome Sequencing**

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Abstract

Background: Drug-resistant tuberculosis (DR-TB) poses a major public health challenge to TB control efforts in Namibia, a country with a high TB burden as classified by the World Health Organization (WHO). Knowledge on factors driving the DR-TB epidemic and epidemiological surveillance is crucial for DR-TB elimination in Namibia. Determining whether transmission plays a role will directly influence the strategies needed to control DR-TB effectively. This study aimed to investigate the transmission dynamics and the population structure of DR-TB in Namibia.

Methods: Whole Genome Sequencing was performed to characterize 476 *Mtbc* clinical strains collected between 2016 to 2023 from patients who had documented rifampicin resistance on Xpert MTB/RIF in all regions of Namibia. Phylogenetic strain classifications, genomic resistance predictions, and core-genome multi-locus sequence typing analysis using SeqSphere (Ridom GmbH, Münster, Germany). Cluster analysis was done using a threshold of 05 alleles. Most *Mtbc* strains were classified as belonging to the lineage 4 (L4; n=463), 12 belonged to the lineage 2 (L2, Beijing) and the remaining one belonged to L1.

Results: Following the new WHO definitions, of the 476 *Mtbc* strains analyzed, 416 (87.4%) were identified to be multi-drug resistant (MDR). Twenty-eight samples (5.9%) were identified as pre-extensively drug-resistant (pre-XDR), nine samples (1.9%) were identified as XDR, and twenty-three (4.8%) were identified as non-MDR. The cluster rates were high, at 76.4% among MDR, 82.1% among pre-XDR, 88.9% among XDR, and 60.9% among non-MDR *Mtbc* strains. All strains of the two largest clusters, with 34 and 24 isolates belonged to the LAM lineage (L4). These findings highlight the significant role of transmission in the DR-TB burden in Namibia. Further investigations are needed to better understand the factors driving DR-TB transmission.

Conclusion: Strengthening molecular epidemiological surveillance and addressing transmission drivers are key to controlling the spread of DR-TB in Namibia.

Keywords: *Mycobacterium tuberculosis*, drug resistance, whole genome sequencing, transmission dynamics, Namibia

viii. Understanding family structures and exposure patterns among DR-TB Patients in Namibia

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Abstract

Introduction: Tuberculosis (TB), caused by *Mycobacterium tuberculosis* (M.tb), remains a global health priority, with 10 million people developing TB disease (approximately 500,000 of whom develop drug-resistant (DR) TB), and 1.6 million dying annually. Namibia, a WHO high TB burden country, has an incidence of 460 per 100,000 and around 800 people develop DR-TB annually. Transmission is influenced by exposure duration, host susceptibility, and contagiousness. Whole-genome sequencing studies in Namibia suggest geospatial clustering of DR-TB transmission, likely linked to contact networks. This study aimed to understand family structures and exposure patterns among DR-TB patients in Namibia. We (a) describe observed family structures and (b) use case examples to illustrate how DR-TB episodes impact family dynamics.

Methods: We identified 122 eligible participants, balanced by gender and reflecting Namibia's TB epidemiology. Data were collected through semi-structured in-depth interviews conducted by trained graduate researchers using participatory kinship mapping activities. Participants listed co-residents, who were marked with dashed and dotted lines.

Results: Eleven distinct family and co-residence patterns were identified, which included simple structures such as 'living alone' or 'small family' to complex structures such as 'multigenerational' and 'blended/step-families'. Many families adjusted their structure in response to DR-TB through four pathways: (1) relocating closer to healthcare services, (2) re-organizing co-residence to optimize care, (3) restructuring to mitigate perceived exposure risk, and (4) cost-saving due to care expenses or income loss. For many families affected by DR-TB, this prompted a re-organization of family structure and co-residence. These household shifts influenced contact networks, impacting household-based active case finding. Understanding transmission networks presents an opportunity to strengthen DR-TB control measures tailored to community needs, reducing mortality and morbidity. Findings are likely transferable to other high DR-TB burden settings in southern Africa. The large scale of the parent project and collaboration with the Ministry of Health provide opportunities to inform policy and practice. Limitations include potential underreporting, incomplete network mapping due to recall challenges, and difficulty accessing remote participants.

Conclusions: Future research should explore how family dynamics can be leveraged to support earlier diagnosis, treatment, and TB prevention.

Keywords: Family Structure, Co-residence, Drug-resistant Tuberculosis (DR-TB), Transmission Dynamics

ix. Advances And Challenges in The Management of Extensively Drug-Resistant Tuberculosis In Rural Africa: A Case Study

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Abstract

Background: Managing extensively drug-resistant (XDR) TB remains a major challenge. Advances such as targeted next-generation sequencing (tNGS) to rapidly detect resistance and new and repurposed drugs have the potential to alleviate some challenges.

Methods: A 30-year-old HIV-negative female was referred from her local clinic to a tertiary TB-Hospital in Namibia with sputum-smear positive XDR-TB. Resistance testing including tNGS revealed resistance to Rifampicin, high dose Isoniazid, Bedaquiline, Linezolid, Fluoroquinolones, Clofazimine, Ethambutol and Ethionamide. Delamanid, Pyrazinamide and Cycloserine were previously included in failed regimens. Susceptibility was documented to Rifabutin and second-line injectables. Her 2-year-old daughter was clinically diagnosed with XDR-TB given the contact history and CXR findings.

Results: Mother, daughter and son lived with extended family 700 km away from the tertiary hospital in a rural area with limited transportation and medical services. The extended family was affected by TB. Income was limited to governmental grants. Cultural and language barriers hindered effective communication with medical staff. Based on resistance pattern and disease extent, treatment with Rifabutin, Delamanid, Cycloserine, Amikacin and Meropenem plus Co-Amoxicillin was initiated in the mother. Her daughter was asymptomatic, had limited disease and injectables were not feasible. She was treated with Rifabutin, high dose Isoniazid, high dose Bedaquilin, Cycloserine and Delamanid. Drug-shortages and extended home-leave upon patient request led to suboptimal treatment in both. Two months into treatment the mother was assessed as treatment failure. Challenges to provide adequate treatment, the mother's loss of trust and with this decision to refuse injectables and determination to travel home, led to treatment interruption. Provision of the daughter's treatment close to her home was explored but not deemed possible.

Conclusion: The challenges surrounding this case contributed to an infectious patient with XDR-TB returning to her community. This is an ethical dilemma between the patient's autonomy, the best interest of the child and public health interests. Whilst a rapid diagnosis of XDR-TB was made with the use of tNGS and a salvage regimen was in principle available, social determinants, access to care and resource and communication challenges are major contributors to the dismal outcome.

Keywords: extensively drug-resistant (XDR) TB, targeted next-generation sequencing (tNGS)

x. Identification of canine ehrlichiosis and babesiosis using light microscopy at the UNAM Veterinary Academic Hospital, Khomas, Namibia

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Abstract

Background: Canine ehrlichiosis and babesiosis are significant vector-borne diseases impacting companion animals in Southern Africa. This study evaluated the prevalence of these diseases in domestic dogs admitted to the University of Namibia (UNAM) Veterinary Academic Hospital in the Khomas region of Namibia. Capillary blood samples were collected from hospitalised patients for analysis of peripheral blood smears using light microscopy. Additionally, patient and clinical parameters, including age, sex, temperature, capillary refill time, mucous membrane colour, and lymph node size, were recorded.

Methods: Light microscopy, a widely used in-house diagnostic tool in Namibia, effectively detected both *Ehrlichia* and *Babesia* on canine blood smears, offering valuable insight into the presence of these tick-borne infections in the Khomas region. Ehrlichiosis was identified in 16/81 (19.8%) of sampled dogs, while babesiosis had a prevalence of 11/63 (17.5%). A binomial test compared these findings to previously reported prevalence rates of 14.2% (ehrlichiosis) and 10.6% (babesiosis) in the Otjozondjupa region of Namibia (Stübe, 2004). Results suggested no significant difference at a 5% significance level ($P = 0.105$ *Ehrlichia*; $P = 0.066$ *Babesia*) for the higher observed rates, suggesting similar prevalence rates in these two regions. No significant correlation was found between disease presence and patient clinical metadata, possibly related to the limited sample sizes from the hospital. To evaluate inter-operator agreement in blood smear analysis, Cohen's kappa test confirmed a moderate agreement for *Ehrlichia* detection ($\kappa = 0.571$) and substantial agreement for *Babesia* detection ($\kappa = 0.670$), indicating the level of reliability with which different operators were able to identify parasite inclusions on blood smear.

Results: Despite the insensitivity of light microscopy, compared to molecular diagnostics, it remains a practically accessible method to veterinarians for detecting *Ehrlichia* and *Babesia* in dogs, particularly in resource-limited settings. These findings highlight the exposure of dogs in the Khomas region to these infections and emphasise the need for ongoing surveillance. While molecular diagnostics enhance species-level identification and diagnostic accuracy, light microscopy remains a vital in-house tool for the rapid diagnosis and management of canine ehrlichiosis and babesiosis at the UNAM Veterinary Academic Hospital, especially when integrated with patient history, clinical signs, and epidemiological data.

Keywords: *Ehrlichia*; *Babesia*; Infectious diseases; Vector-borne pathogens; Dogs

xi. Understanding family structures and exposure patterns among DR-TB Patients in Namibia

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Abstract

Introduction: Tuberculosis (TB), caused by *Mycobacterium tuberculosis* (M.tb), remains a global health priority, with 10 million people developing TB disease (approximately 500,000 of whom develop drug-resistant (DR) TB), and 1.6 million dying annually. Namibia, a WHO high TB burden country, has an incidence of 460 per 100,000 and around 800 people develop DR-TB annually. Transmission is influenced by exposure duration, host susceptibility, and contagiousness. Whole-genome sequencing studies in Namibia suggest geospatial clustering of DR-TB transmission, likely linked to contact networks. This study aimed to understand family structures and exposure patterns among DR-TB patients in Namibia. We (a) describe observed family structures and (b) use case examples to illustrate how DR-TB episodes impact family dynamics.

Methods: We identified 122 eligible participants, balanced by gender and reflecting Namibia's TB epidemiology. Data were collected through semi-structured in-depth interviews conducted by trained graduate researchers using participatory kinship mapping activities. Participants listed co-residents, who were marked with dashed and dotted lines.

Results: Eleven distinct family and co-residence patterns were identified, which included simple structures such as 'living alone' or 'small family' to complex structures such as 'multigenerational' and 'blended/step-families'. Many families adjusted their structure in response to DR-TB through four pathways: (1) relocating closer to healthcare services, (2) re-organizing co-residence to optimize care, (3) restructuring to mitigate perceived exposure risk, and (4) cost-saving due to care expenses or income loss. For many families affected by DR-TB, this prompted a re-organization of family structure and co-residence. These household shifts influenced contact networks, impacting household-based active case finding. Understanding transmission networks presents an opportunity to strengthen DR-TB control measures tailored to community needs, reducing mortality and morbidity. Findings are likely transferable to other high DR-TB burden settings in southern Africa. The large scale of the parent project and collaboration with the Ministry of Health provide opportunities to inform policy and practice. Limitations include potential underreporting, incomplete network mapping due to recall challenges, and difficulty accessing remote participants.

Conclusion: Future research should explore how family dynamics can be leveraged to support earlier diagnosis, treatment, and TB prevention.

Keywords: Family Structure, Co-residence, Drug-resistant Tuberculosis (DR-TB), Contact Networks, Transmission Dynamics

xii. Identification of canine parvovirus infection in domestic dogs and the influence of co-infection with canine ehrlichiosis on clinical outcome at the UNAM Veterinary Academic Hospital

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Abstract

Backgrounds: Canine parvovirus (CPV) and *Ehrlichia* are widespread in Namibia's domestic dog population, yet CPV-*Ehrlichia* co-infection remains underreported, with no studies on its prevalence in Namibian dogs. This study assessed the prevalence of co-infection in CPV-positive patients admitted to the University of Namibia (UNAM) Veterinary Academic Hospital and examined associations with clinical parameters and patient outcomes. A convenience-sampled cohort of 56 CPV-infected dogs was analysed, recording clinical metadata, duration of hospitalisation, and mortality rates.

Methods: Analysis of faecal samples using a CPV antigen rapid test confirmed CPV infection in each patient. Peripheral blood smears were examined under a light microscope, revealing *Ehrlichia morulae* in 5/56 (8.9%) CPV-infected patients. To enhance the reliability of *Ehrlichia* diagnosis based on microscopy, inter-operator agreement between the primary investigator and hospital clinical staff was assessed using Cohen's kappa test.

Results: Results indicated fair agreement for *Ehrlichia* detection ($\kappa = 0.222$), reflecting the consistency with which different observers identified parasite inclusions on blood smears. A binomial test compared the observed co-infection prevalence to a previously reported *Ehrlichia* mono-infection rate of 14.2% in central Namibia (Stübe, 2004). The results indicated a statistically significant difference at the 5% significance level ($P < 0.001$), suggesting distinct prevalence rates between *Ehrlichia* mono-infection and CPV co-infection in dogs. No significant correlation was found between disease presence and patient clinical metadata, possibly due to the limited sample size from the hospital. Duration of hospitalisation and mortality rates were recorded as indicators of clinical outcome. A T-test assessing the association between length of hospital stay and co-infection found no significant relationship ($P = 0.112$). Similarly, a chi-square test evaluating the association between mortality rate and co-infection yielded no significant results ($P = 0.645$). The study confirmed the prevalence of CPV and *Ehrlichia* co-infection in dogs at the UNAM Veterinary Academic Hospital but found no significant association with clinical parameters or patient outcome. These findings suggest that the impact on clinical outcome is multi-factorial, potentially influenced by disease complexity and treatment protocols.

Conclusion: Further research using molecular diagnostics and a larger sample size is recommended to better understand the prevalence and effects of haemoparasite co-morbidity in CPV-infected dogs.

Keywords: Canine parvovirus; *Ehrlichia*; Infectious diseases; Vector-borne pathogens; Dogs

xiii. Evaluation of Whey for Extraneous Components in Fermented Milk

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Abstract

Background: Analysis of the physical, chemical and microbiological characteristics of milk is essential for ensuring the quality and safety of milk and milk products. The aim of the current investigation was to evaluate the physicochemical properties of whey as a means of detecting extraneous components in fermented milks from commercial sources in Zimbabwe.

Methods: Whey (n=63 samples) was harvested from fermented sour milks by centrifugation at x 1818g for 10 minutes.

Results: The pH of whey, as measured with an electronic pH meter, varied from pH 3.9 to 4.3 with a mean of 4.25 ± 0.02 SD. All tested samples were essentially within the normal pH range of 4.0-4.5 for fermented milks. Turbidity of whey was determined spectrophotometrically by measuring the absorbance at 590 nm, and ranged from 0.1 to 2.5 absorbance units with an average of 0.8 ± 0.6 SD. From the results, 13.23% of the whey samples were classified as turbid (1.5-2.5 absorbance units), 45.59% translucent (0.5-1.5 absorbance units) and 41.18% transparent (0.1-0.5 absorbance units). The specific gravity of whey was determined using an optical refractometer. Values extended from 1.020 to 1.033 with a mean of 1.026 ± 0.004 SD, compared to the normal range of 1.025-1.030. Thus 56% of the whey samples were found to have specific gravity values within the normal range, 33% were below normal and 11% above normal.

Conclusions: Measurement of the pH of whey is important in safeguarding fermented milk against contamination with Gram-negative psychrotrophic bacteria which grow at pH above 4.5, chiefly *Pseudomonas* species and members of the family Enterobacteriaceae. However, contamination by Gram-positive spore-forming *Bacillus* species, which grow by fermentation, cannot be ruled out by this method. Determination of the specific gravity of whey is critical in screening for extraneous water, which may originate from contaminated sources. Specific gravity also detects unlawful and possibly hazardous food additives. From a food safety perspective, turbidity of whey helps to assess contamination of fermented milk with chemical agents, psychrotrophic bacteria, viruses, yeasts, moulds or even algae. Most milk samples tested in our study were fit for human consumption as pH, turbidity and specific gravity fell within normal ranges.

Key words: Fermented milk, pH, Turbidity, Specific gravity

xiv. Screening of Bovine Paratuberculosis in Namibia, Case study of Neudamm Farm.

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Abstract

Background: This case study is extracted from an ongoing study being conducted to detect the presence of *mycobacterium avium* subsp in bovines and presented as an interim report.

Methods: *Paratuberculosis* (MAP) in the faecal samples collected from the Neudamm farm of the University of Namibia.

Results: A total of 83 faecal samples has been collected so far from 12 dairy cows, 29 beef cattle (Simmental breed), 27 beef cattle (Afrikaner breed), and 15 (wildlife, such as Oryx, Springbok, Hyena and Hartbees) samples were collected between April and October 2024. Thirty-eight (38) samples have been screened for *mycobacterium avium* subsp. *Paratuberculosis* using the Ziehl Neelsen staining procedure in the microbiology laboratory of veterinary medicine. Of the 38 samples, 19 (50%) samples were suspicious.

Conclusion: The study is ongoing and expertise and further confirmation methods are necessary to confirm the presence of *Mycobacterium avium paratuberculosis* (MAP), these will include culturing and identification, as well as molecular characterization.

Keywords: Bovine Paratuberculosis, *Mycobacterium avium* subsp. *Paratuberculosis*, faecal samples

xv. **A rare case of isolated active hydatid cyst (Echinococcus) infestation in a 16-year-old's thyroid gland.**

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Abstract

Background and Methods: A 16-year-old female with a right anterior cervical lump for about a year is presented as a case report.

Results: A 16-year-old female presented with a right anterior cervical lump for about a year is presented. The mass was painless, gradually increasing in size, and dysphagia as an associated symptom. There was no history of fever, night sweats and other no systemic symptoms were reported. The patient and not been on any medication. Surgical and family history of thyroid disorders or neoplasms were unremarkable. Examination of the neck showed a smooth cyst larger on the right thyroid lobe. Patient's blood results showed an euthyroid state.

Most recent cervical ultrasonography done (within the last year) revealed features of a large encapsulated cystic lesion with good posterior enhancement measuring 40 x 35 x 24 mm seen in the mid-pole of the right lobe of the thyroid gland, benign in appearance. The thyroid tissue on the left lobe was of normal size, no nodules noted on the left with normal blood perfusion seen. The isthmus was of normal size and smooth echogenicity. No involvement of surrounding neck tissue and no lymphadenopathy was detected. A right thyroid lobectomy was performed, and tissue sent for pathology. Microscopic examination showed thyroid parenchyma with a cystic lesion, showing features of inflammation with fragments of cyst wall containing 3 layers – an inner most germinal layer with some nuclei, the laminated membrane with a vascular refractile layer and an outer adventitial layer consisting of dense fibrovascular tissue with varying amount of chronic inflammatory infiltrate. Protoscolices with hooklets were noted within the lumen. Patient then had a CT chest and abdomen/ pelvis performed to rule out other hydatid cysts of which indicated no other cysts. Post-operative course was un-eventual. Patients follow up 6 months after surgery proved her euthyroid status, no need for hormone supplement.

Conclusion: Rare involvement of the thyroid is linked to the narrow thyroid arteries that make it difficult for larvae to easily flow through. Due to the structure of the hydatid cyst, the outer layer adheres to the thyroid tissue and proximal structures causing compressive symptoms in a manner similar to a carcinoma of the thyroid.

Key Words: Thyroid gland, Hydatid cyst, Echinococcus, Goitre, Infestation

xvi. Co-creating a play-based intervention to address behavioural problems among children below 6 years resident at a Namibian Children's Home

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Abstract

Background: Behavioural problems in children often stem from underlying issues like stress, developmental delays, and may indicate learning or mental health disorders. If not appropriately addressed, behavioural problems may become chronic, persisting into adolescence and adulthood, potentially impacting their social, academic, and personal lives. This paper reports on a play-based intervention co-created by occupational therapy students, children and staff with the aim of addressing behavioural problems at a children's home in Namibia.

Methods: The process involved four project cycle stages: Situational analysis, Planning, Implementation and Evaluation. During the situational analysis, interviews were conducted with caregivers, teachers and management staff at the institution. Children were observed during play, and a behavioural checklist was used to further explore the behaviour challenges among 20 children. Intervention planning workshops were held with all stakeholders and during the third stage, the occupational therapy students facilitated the implementation of the play-based intervention. A Test of playfulness was used to measure play of the children before and after implantation of the intervention. As part of the evaluation stage, a separate group of students conducted interviews aimed at evaluating the intervention. Content analysis was used to analyse all qualitative data, and descriptive statistics were used to analyse quantitative data.

Results: The most common behavioural challenges exhibited by the children as reported by caregivers and teachers were being hyperactive (93.3%), disruptive (59.9%), aggressive (58.3%) and socially inappropriate behaviours (54.3%). Comparing the play of the children before and after the intervention, revealed an increase in playfulness of the children. Caregivers reported that the behaviour of the children had improved. There were limited incidences of breaking toys, fighting one another and the children took up responsibility of packing their toys as well as other house chores like clearing the tables after mealtime. Caregivers also reported that they now have a common understanding of the children, and teamwork amongst the staff improved.

Conclusions: Co-creation of community-based interventions brings significant benefits like increased relevance, acceptability, and effectiveness of interventions by ensuring they directly address community needs, fostering ownership and participation, leading to better implementation and sustainability.

Keywords: Co-creation, Children, behavioural challenges, play-based interventions.

xvii. Factors That Influence Adolescents on the use of Contraceptives in The Dreams Project, Khomas Region Namibia

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Abstract

Background: Reproductive health programs emphasizing family planning and contraception are demonstrably effective in enhancing public health outcomes. However, suboptimal contraceptive utilization persists as a significant health challenge in sub-Saharan Africa. The DREAMS project aims to improve access to reproductive health services, including contraception; however, uptake among eligible adolescents remains low (14% of sexually active adolescents). This study investigated the determinants of contraceptive use among adolescent girls participating in the DREAMS project within the Khomas Region of Namibia. Employing binary logistic regression, bivariate analysis, and cross-tabulation, this research aimed to identify demographic, social, and economic factors associated with contraceptive use; assess the correlation between adolescent knowledge, attitudes, and behaviors regarding contraception; and evaluate the relative effectiveness of different contraceptive delivery modalities.

Methods: A cross-sectional survey was conducted using standardized questionnaires. A sample of 359 adolescent girls aged 15–19 in the DREAMS project residing in the Khomas Region was selected using a random sampling technique. The sample size was determined using Epi Info 7 version 7.2.5 with a 95% confidence level.

Results: Significant associations were found between contraceptive use and age, education, household arrangement, method, reasons for non-use, and parental awareness ($p < 0.05$). Unemployment strongly correlated with higher contraceptive use (OR: 41.252). Conversely, parental awareness of their child's use (OR: 0.097) and discussions of sexual issues with parents (OR: 0.104) were associated with lower odds of adolescent contraceptive use. Condom use was most common, and stigma was the primary reason for non-use.

Conclusion: Future research should investigate the underlying mechanisms through which specific household structures influence contraceptive use and further explore the dynamics of communication regarding contraception between parents, adolescents, and healthcare providers.

Keywords: Adolescents, Contraceptives, Dreams Project, Reproductive health

xviii. Perceptions And Barriers to Disclosure of HIV Status of Children by Caregivers at Donkerhoek Clinic, Windhoek, Khomas Region, Namibia

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Abstract

Background: Disclosure of HIV status in general and to children in particular has remained a challenge along the continuum of HIV prevention, treatment care and support. Failure to disclose often brings several challenges for both the caregiver and the children involved. The study aimed to investigate the perceptions and barriers to disclosure of HIV status of children by caregivers at Donkerhoek Clinic, Windhoek, Khomas Region.

Methods: This study used a qualitative research approach whereby 35 parents and caregivers were interviewed using a semi-structured interview guide at Donkerhoek Clinic in Windhoek. Moreover, in-depth interviews were held with the parents and caregivers who volunteered to participate in the study after giving consent to participate in the study.

Results: The study found that parents and caregivers are still facing challenges which includes: the fear of not knowing how the child will react when they receive the news of their HIV status, fear that the child might commit suicide, stop taking their medication, blame them for infecting them with deadly virus and strained relationships with the child for the rest of their lives. Additionally, the study also found that parents and caregivers often depend on social workers to a greater extent for support as well as friends when they are confronted with disclosure issues. Furthermore, some parents resort to divine interventions such as prayer to cope with the HIV positive disclosure issues.

Conclusion: as much as parents and care givers are willing to disclose, they are still facing serious challenges as to when and the unknown reaction to the news of the HIV positive status. Besides, the study recommends that more should be done to help parents and caregivers to gain skills and competencies for disclosure. To sum up, in as much as social workers are helping, there is a need to develop internal capacities among capacities among parents and care givers to deal with disclosure issues instead of relying on others all the time.

Keywords: Disclosure, HIV Status, Perceptions, Barriers, Caregivers, Children

xix. An Exploratory Study of Caregivers' Mental Health Readiness During Reintegration of Children from Residential Child Care Facilities in Khomas, Oshikoto and Oshana Regions

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Abstract

Background: Reintegration of children from Residential Childcare Facilities (RCCFs) into their families and communities of origin is a significant transition of children for child welfare services worldwide. However, this process presents significant emotional and psychological challenges for caregivers with the responsibility of the care and protection of the children, particularly in human resource constrained settings like Namibia. Despite the critical role caregivers play in reintegration, their mental health readiness remains underexplored in research and practice. This study aimed to explore caregivers' mental health readiness during reintegration, focusing on the effects of separation on their mental health, support services available to them, implications for the quality of childcare to the children who remain and the role of caregivers in the reintegration process.

Methods: A qualitative research approach, using a phenomenological design, was used to investigate caregivers' lived experiences. The study was conducted in 6 RCCFs across Khomas, Oshikoto, and Oshana regions which were selected due to their longstanding childcare facilities and experienced caregivers. Twenty-Six (26) caregivers with at least (5) years of work experience in reintegration were purposively sampled. Semi-structured interviews were conducted, and thematic analysis was used to identify key patterns and themes.

Results: The study revealed that re-integration presents significant emotional and practical challenges due to unstructured reintegration processes in all RCCFs. Additionally, there is minimal mental health support, with caregivers relying on self-coping strategies such as spirituality, social support, and recreational activities. The study highlights the need for structured reintegration processes across RCCFs, strengthening caregiver' involvement, reintegration training, continuous mental health support to enhance reintegration outcomes, improve caregivers' well-being and quality child-care.

Conclusion: The study also recommends strengthening reconstruction services to families of origin, and their separated children for sustainable reintegration.

Keywords: Reunification, alternative care, residential care, mental health, Namibia.

xx. Reduce or Diffuse children's tantrums in Rehoboth, Namibia: A Stakeholder Engagement

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Abstract

Background: Children develop autonomy between two and four years, as they learn to express their emotions, frustrations, desires, and needs. Tantrums are a normal part of development, but parents find them challenging to manage and for some children tantrums persist beyond four years. Tantrums have various triggers including sensory modulation challenges. Undergraduate occupational therapy research, uncovered Rehoboth mothers' frustrations, and lack of confidence to manage tantrums. This paper reports on community outreach and development project empowering mothers from Rehoboth, Namibia to understand causes of tantrums, and to implement basic sensory modulation that may help children regulate their own emotions.

Methods: Mothers engaged in a series of three, two-hour workshops that reported research findings, explored sensory modulation strategies, and discussed emotional regulation. Pre- and post-tests measured mothers' knowledge of tantrums and sensory modulation. Mothers actively participated in discussions, made visual aids as reminders of principles, and created toys to help children regulate themselves. Participants shared the key message from each workshop with one friend and monitored her own child's tantrums in the time between workshops for discussion at the subsequent workshop. Finally, participants reflected on the benefits gained knowledge to reduce or diffuse tantrums in a focus group discussion that was analysed deductively.

Results: Twenty-four participants completed the series of three workshops, and all reported positive changes in the way they managed tantrums with their children. While these mothers valued opportunity to discuss their management of tantrums in an exclusive group for women, they did request a similar workshop for the fathers of their children. Training for pre-school teachers was also identified as a need during the focus groups discussion.

Conclusion: Empowering mothers in a community may impact the wellbeing of her children. Discussing their challenges in a safe, non-judgemental environment, while exploring solutions together empowered these participants to reduce or diffuse tantrums. Creating the calming and alerting toys added a practical aspect to the discussions that mothers valued.

Keywords: Community outreach and development; Tantrums, Sensory modulation; Occupation of mothering

xxi. Factors Hindering the Uptake of Vitamin a Supplementation Among Under Five Children, Oshakati District, Oshana Region, Namibia

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Abstract

Background: Vitamin A supplementation is a crucial public health intervention aimed at reducing child mortality and morbidity, particularly in low- and middle-income countries where vitamin A deficiency is prevalent. This study aimed to assess the factors influencing the uptake of Vitamin A supplementation among children under five years old in the Oshakati district, Namibia.

Methods: The study employed a quantitative cross-sectional study design. A total of 198 parents were surveyed at five health centers using structured questionnaires to gather information on factors such as income, education, transport, and healthcare access.

Results: The study found that 46.5% of participants strongly agreed that Vitamin A supplementation should start at six months, and 53% agreed that parents should know their child's follow-up schedule. Key barriers included transportation costs (78.3%) and long wait times (69.2%), while 65.7% reported Vitamin A shortages. Knowledge was high, with 83.8% strongly agreeing on the importance of Vitamin A for-eye health and 76.8% recognising its role in preventing deficiency, though gaps remained, such as awareness of xerophthalmia (33.8%). Chi-square tests were conducted to determine associations between socio-demographic factors and supplementation uptake, with results showing no statistically significant associations between variables like education, income, and occupation with Vitamin A adherence.

Conclusion: The study concluded that enhancing health education, improving healthcare access, and addressing transportation barriers are vital to increasing Vitamin A supplementation adherence.

Keywords: factors; hindering; vitamin A; supplementation; under-five children; Namibia.

xxii. Perspectives of families on quality of healthcare in the intensive care unit: a qualitative study.

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Abstract

Background: Understanding family perspectives plays a pivotal role in patient- and family-centred care as well as in quality assessment and improvement in the intensive care unit (ICU). While much attention has been focused on patient outcomes and satisfaction, the perspectives of families remain understudied. The study aimed to explore and describe the perspectives of patients' families on the quality of healthcare received in ICUs across Namibia.

Methods: The focus of this study was mainly on families, and it employed a qualitative approach and exploratory descriptive design. It was conducted in 11 ICUs in both the private and public sector in Namibia between December 2023 and April 2024. Purposive sampling was employed, and 10 in-depth telephonic interviews using an interview guide were conducted with families. Thematic content analysis was used to analyse the data.

Results: Four (4) themes and 11 subthemes emerged from the data. The themes are: (i) efficient care, (ii) effective communication, (iii) provision of holistic care, and (iv) challenges experienced by family members. The findings suggest that families were satisfied with the quality of care received in ICUs. The families perceived efficient care by healthcare providers, whom they described as knowledgeable and professional, acting with haste, responsive, and dedicated. Flexibility of healthcare providers in rendering services and effective communication were also highlighted. The families also experienced challenges in the ICUs, namely inadequate space, lack of equipment and supplies, as well as a shortage of human resources.

Conclusion: Perspectives of families on the quality of care contribute to quality assessment and quality improvement in the intensive care unit. Understanding family perspectives not only aids in alleviating the stress experienced by the families but also plays a pivotal role in informing policy and strengthening patient- and family-centred care.

Keywords: Intensive Care Unit (ICU), Quality of care, Families, Qualitative approaches

xxiii. Motor vehicle accident victims care patterns at health facilities in Otjozondjupa region.

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Abstract

Background: Existing literature has shown that quality emergency medical care (EMC) for motor vehicle accident (MVA) victims is important for their survival and disability limitation. There is also evidence demonstrating that the number of incidences and deaths due to MVAs is increasing alarmingly. Hence there is a need for strategies development to enhance EMC delivery. Therefore, the purpose of this study was to investigate patterns of facility-based EMC for MVA victims on admission at health facilities in Otjozondjupa region.

Methods: The study adopted a quantitative approach, cross-sectional and analytical designs. Data was collected through extracting information from patient files using checklists. Key study findings included the following: proportion of male and female MVA patients does not differ significantly across four districts hospitals; age groups distribution appears to vary significantly across district hospitals.

Results: Otjiwarongo has higher proportion of morning and afternoon admissions, while Okahandja has higher proportion of evening and after-midnight admissions; patient outcomes (discharged, transferred or died) vary considerably across districts hospitals; highest proportion of deaths due to MVAs occurred in 61 – 75 years age group (20%), while < 6 years and >75 years age groups had no deaths; no deaths occurred during morning or after midnight admissions, while afternoon admissions had highest proportion of deaths (15.2%); Tuesdays showed highest proportion of deaths (20%), while no deaths occurred on Mondays or Thursdays; patients with lower GCS scores <10/15 had higher mortality rate (33.3%) compared to those with higher scores; all deaths occurred in patients receiving IV infusion; while patients with chest tubes were transferred to health facilities with advanced EMC resources. Finally, all deaths occurred in patients receiving supplementary oxygen, who also had higher transfer rates.

Conclusion: The study concludes that findings have negative consequences on EMC care patterns; appropriate intervention strategies development is essential; more staffing, EMC equipment, logistics and supplies availability are more needed during times of the day, days of the week and months of the year observed to have more admissions. Therefore, the study recommends that adequate number of suitably qualified staff be allocated to emergency medical care departments for quality and efficient EMC provision to MVA victims on time.

Key words: Strategies; Enhance; Delivery; EMC; MVA; Victims

xxiv. Development of strategies to enhance the delivery of health facility- based emergency medical care for motor vehicle accident victims on admission at health facilities in Otjozondjupa region, Namibia

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Abstract

Background: This study focused on emergency medical care (EMC) for motor vehicle accident (MVA) victims. Its purpose was to develop strategies to enhance the delivery of health facility- based EMC. Study objectives were to assess and describe existing emergency medical care resources available [phase 1 a)], explore and describe emergency medical care delivered to motor vehicle accident victims [phase 1b)], develop a conceptual framework [phase 2], develop strategies [phase 3] and validate effectiveness of strategies by panel of EMC experts [phase 4].

Methods: The study was necessitated by the increasing number of incidents and deaths caused by MVAs. The study adopted quantitative approach, cross- sectional and analytical designs, and it was conducted in four phases. Target populations were nursing service managers and MVA patients' files. Research instruments used to collect data were self-administered questionnaires and observational health facility checklists. Non-probability convenient or purposive sampling technique was used to select sample size. No sampling formula was used as the total accessible populations for both phases 1(a) and (b) were included in the study.

Results: Seven nursing service managers completed self- administered questionnaires with a response rate of 100%, and a total of 452 MVA patients' files were retrieved and reviewed. Key findings included: the proportion of male and female MVA patients does not differ significantly across four districts hospitals; age groups distribution appears to vary significantly across four district hospitals; Otjiwarongo has a higher proportion of morning and afternoon admissions, while Okahandja has higher proportion of evening and after-midnight admissions; patient outcomes (discharged, transferred or died) vary considerably across four district hospitals; highest proportion of deaths due to MVAs occurred in 61 – 75 year age group (20%), while the youngest (< 6 years) and oldest (>75 years) age groups had no deaths; no deaths occurred during morning or after midnight admissions, while afternoon admissions had the highest proportion of deaths (15.2%); Tuesdays showed highest proportion of deaths (20%), while no deaths occurred on Mondays or Thursdays; patients with lower GCS scores (<10/15) had higher mortality rate (33.3%) compared to those with higher scores; all deaths occurred in patients receiving IV infusion; while patients with chest tubes were transferred to health facilities with advanced EMC resources. Finally, all deaths occurred in patients receiving supplementary oxygen, who also had higher transfer rates.

Conclusion: Study findings describe both the pattern of presentation of MVA victims and negative outputs experienced by MVA victims.

Key words: Strategies; Enhance; Delivery; EMC; MVA; Victims.

xxv. Implementing Pillars of Global Health to Enhance Skills of Nurse Midwives and Reduce Maternal/Foetal Mortality in Namibia

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Abstract

Background: In Namibia, the maternal mortality rate is 215 per 100,000 live births annually, and nearly double that in rural areas. Nurse midwives are responsible for many deliveries in rural areas and face significant challenges associated with direct and indirect causes of death. Implementing the pillars of global health to improve midwife knowledge and skills may lead to a gradual reduction in maternal and fetal mortality rates. The study aimed to describe steps taken to develop, implement, and evaluate an international Advanced Life Support in Obstetrics (ALSO) training program and Helping Babies Breathe (HBB) course for nurse midwives while fulfilling the major pillars of global health partnerships. A position statement.

Methods: Utilising the pillars of global health partnerships (collaboration, trust, equity, sustainability, funding, assessment, principled engagement, and health promotion), leadership from the University of Namibia (UNAM) and Idaho State University (ISU) identified ways to address the high maternal and fetal mortality rates. Planning ensued (as part of the Methods) to introduce ALSO and HBB for midwives to enhance clinical skills in obstetrics with the intention of UNAM faculty becoming course instructors to ensure program sustainability.

Results: Conceptual framework and meetings began in 2019 between universities where shared interests and concerns around fetal/maternal mortality were explored. Through collaborative meetings, a trusting relationship was formed garnering equal input from both institutions. In 2024, funding was secured to purchase training models and send ISU instructors to Namibia. These instructors provided training to 18 midwife faculty and 18 midwife students and certified them in HBB and as ALSO providers. In 2025, ISU instructors will train another 18 midwife students as ALSO providers and certify 8 midwife faculty as ALSO instructors so that a sustainable program can continue in the future. ISU faculty will also certify instructors at four district hospitals in 2025 and over the course of several years assess outcomes and changes in maternal and fetal mortality rates to determine programmatic impact.

Conclusions: Successful application of the pillars of global health created a valued international collaboration between UNAM and ISU to enhance clinical skills of nurse midwives. Outcomes of training on mortality will be assessed in the future.

Keywords: Midwives, Global health, Maternal Mortality, Fetal Mortality, Education

xxvi. Demographic Factors Influencing the Findings in Patients Referred for Upper Gastrointestinal Endoscopy

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Abstract

Background: There is a sparsity of published data regarding upper gastrointestinal diseases in Namibians referred for upper gastrointestinal endoscopies and biopsies. The study aimed to 1. identify the demographic factors (age and sex) that influence important positive findings in patients that were referred for an upper gastrointestinal endoscopy 2. determine the prevalence of the different pathologies that lead to referrals for an upper gastrointestinal endoscopy in Namibia and 3. compare the data between the state institution and the private institution.

Methods: 2639 patients who underwent upper gastrointestinal endoscopy with biopsies in 2021 (total n = 1266, State = 308 Private = 958) and 2022 (total n = 1373, State = 656 Private = 717) had their results reviewed.

Results: Most endoscopy histology results were seen in patients above the age of 55 in the State (42.5%) and with Private 26.8% over 55 years in the sector. Chronic gastritis is the most prevalent finding, with 90.7% in the Private sector and 63.0% in the State sector. No oesophageal carcinoma was reported in the Private sector; however, this was seen in 7.9% of cases in the State sector. There was a higher prevalence of gastric carcinoma in the State sector (5.7%), compared to the Private sector (0.7%). The percentage of *Helicobacter pylori* positive cases was 34.6% in the Private sector and 37.4% in the State sector.

Conclusion: Most cancers are reported via the State-Based Health system. Chronic gastritis is the most common upper gastrointestinal disease in Namibia, with a high prevalence of *Helicobacter pylori* associated with the disease. Next steps with this work include a deeper analysis of the demographics and to compare, these results will be with findings collected after the end of the Covid-19 pandemic.

Keywords: Gastrosocopy, Gastritis, GIT, Endoscopy, Stomach, Duodenum

xxvii. 2'-5'-oligoadenylate synthase-like protein (OASL1) role in liver injury

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Abstract

Background: Liver fibrosis, characterized by excessive extracellular matrix deposition, is a hallmark of most chronic liver diseases. In response to injury, the liver undergoes a repair process that leads to matrix buildup and remodelling, ultimately resulting in fibrosis. Type I interferons (IFNs), such as IFN- α and IFN- β , play crucial roles in adaptive immunity and protection against chronic liver damage by activating interferon-stimulated genes (ISGs). Among these ISGs, 2'-5'-oligoadenylate synthase-like protein 1 (OASL1) is primarily known for its antiviral functions, but its role in liver fibrosis remains unclear.

Methods: To investigate this, liver fibrosis was induced in mice using two models: a 0.1% diethoxycarbonyl-1,4-dihydrocollidine (DDC) diet to model cholestatic fibrosis and carbon tetrachloride (CCl₄) to model hepatotoxin-mediated fibrosis.

Results: Histological analyses revealed reduced liver damage and lower expression of fibrotic markers, such as α -smooth muscle actin, in OASL1-deficient (OASL1^{-/-}) mice compared to wild-type controls. OASL1^{-/-} mice exhibited significantly increased IFN- α and IFN- β mRNA levels, regulated by interferon regulatory factor 7 (IRF7). Additionally, OASL1 deficiency mitigated chronic liver fibrosis by modulating nuclear factor- κ B (NF- κ B) signaling. In acute liver injury models, OASL1^{-/-} mice demonstrated reduced alanine aminotransferase (ALT) levels and lower pro-inflammatory cytokine production, alongside enhanced IFN- α and IFN- β expression, resulting in improved outcomes. Notably, macrophages marked by F4/80 expression were more prevalent in OASL1^{-/-} mice treated with CCl₄, suggesting a synergistic role between macrophages and OASL1 deficiency in mitigating liver damage.

Conclusion: These findings highlight OASL1 as a negative regulator of type I IFN production via NF- κ B signaling, exacerbating liver fibrosis and injury.

Keywords: OASL1, liver fibrosis, type I interferon, NF- κ B, macrophages, mice

xxviii. The prevalence rates and patterns of dyslipidaemia among type 2 diabetes mellitus patients at Intermediate Katutura Hospital

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Abstract

Background: Type 2 Diabetes Mellitus (T2DM) is a major global public health concern, affecting approximately 5.1% of the Namibian population. It is frequently associated with macrovascular complications, particularly cardiovascular disease. Dyslipidaemia, characterized by abnormal lipid levels, is a common metabolic disorder in T2DM patients and a significant risk factor for cardiovascular complications. This study aimed to determine the prevalence and patterns of dyslipidaemia among T2DM patients at Intermediate Katutura Hospital.

Methods: A cross-sectional, retrospective descriptive study was conducted among T2DM patients at Intermediate Katutura Hospital. A sample size of 150 participants was determined using Cochran's formula. Data were collected using a pre-designed questionnaire and analysed using Microsoft Excel and R Programming.

Results: A total of 89 T2DM patients were included in the study. The prevalence rate of dyslipidaemia was recorded at 78%, highlighting a substantial burden within this patient population. Out of 89 participants, 69 (78%) exhibited at least one abnormal lipid level. Hypertension was observed in 71% (63 participants) of the study participants, with a notable 53% classified as having stage 2 hypertension. In contrast, 28% (25 participants) had blood pressure within the normal range. The most prevalent pattern of dyslipidaemia among the study participants was reduced HDL levels (66%), followed by elevated triglycerides (47%), high LDL levels (21%), and increased total cholesterol levels (18%). Only 22% of the study participants who had dyslipidaemia were on treatment for statins. Additionally, a significant correlation was observed between dyslipidaemia and key risk factors, including Body Mass Index (BMI) and HIV/AIDS, among patients with type 2 diabetes mellitus.

Conclusions: The high prevalence of dyslipidaemia (78%) among T2DM patients at Intermediate Katutura Hospital highlights the need for routine lipid screening and early diagnosis in this population. Notably, most affected individuals did not have dyslipidaemia as a pre-existing comorbidity, emphasizing the progressive nature of the disorder in diabetes. These findings underscore the importance of integrated management strategies to reduce cardiovascular risks in T2DM patients.

Keywords: Patterns of dyslipidaemia, Type 2 diabetes mellitus, High-Density Lipoprotein, Low-Density Lipoprotein, Triglycerides.

xxix. The knowledge about Postpartum Haemorrhage among midwives working in the maternity departments of two tertiary hospitals in Namibia

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Abstract

Background: Postpartum haemorrhage (PPH) remains the leading direct cause of maternal morbidity and mortality worldwide, with the high number of maternal deaths occurring in developing countries. Namibia is not an exception, PPH is the leading cause of maternal deaths, accounting for more than 25% of all maternal deaths nearly every year. The presence of a midwife with sufficient knowledge about PPH at every birth, is one of the highly recommended solutions to alleviate the high number of maternal deaths caused by PPH. The objectives of this study were to determine if midwives working in the maternity departments of two tertiary state hospitals in Namibia have knowledge about assessing, diagnosing, preventing and managing PPH. Additional to the objectives, the study wanted to determine associations between the bibliographical data of the registered and enrolled midwives and their knowledge scores.

Methods: A quantitative descriptive study was applied in the study. A self-administered validated questionnaire was developed and used in this study to collect the data. Ninety-three participants participated and completed the questionnaires in the researcher's presence because competence was tested.

Results: For the purpose of this study competence was based on a knowledge score of $\geq 80\%$. The study found $n=76$ (82%) participant's incompetent about PPH by obtaining a knowledge score $<80\%$. Only $n=17$ (18%) participants obtained a knowledge score of $\geq 80\%$. Additionally, only two (2%) of the 93 participants obtained a knowledge score of $\geq 80\%$ in all four PPH main domains (assessing, diagnosing, preventing and managing PPH). Further analysis also indicated that the demographical data of the participants such as professional categories, years of maternity experience, training in emergency obstetrics and newborn care and qualifications did not influence the participants' knowledge.

Conclusion: The study found most participants (82%) incompetent about PPH, thus the study concluded that the high number of maternal deaths are also attributed by lack of knowledge among midwives. The study, therefore, recommends urgent training to be conducted in the two tertiary hospitals to close the knowledge gaps among the midwives.

Key words: Postpartum haemorrhage, knowledge, midwives, maternal morbidity and mortality

xxx. Nurses Knowledge And Practice Regarding Pain Management in Roman Catholic Hospital ICU, Khomas Region, Namibia

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Abstract

Background: Elimination of patients' pain and suffering is an important responsibility of healthcare professionals and as generally understood, pain management is the responsibility of all healthcare professionals, including nurses, should therefore be required to assign higher priority to it. Pain is a significant burden experienced by patients admitted to ICU. Acute conditions associated with severe pain include surgical incision, traumatic wounds, effect of prolonged immobility and treatment by invasive procedures. Pain assessment requires health care providers to have good knowledge, attitudes and practices regarding pain management in ICU settings. Therefore, the purpose of this study was to assess the current level of knowledge and to describe the clinical practices regarding pain management among nurses in ICU Roman Catholic Hospital, Khomas Region.

Methods: The study had a population of 31 nurses who had experience of at least 6 months' prior data collection procedure. Data were collected through the random distribution of self-administered questionnaires. Quantitative analysis was employed, utilizing Microsoft Excel 2017 to gather and subsequently importing the data into SPSS software, version 27. The data were categorized into three sections: Section A) Demographic data, section B) Nurses' knowledge on pain management, and section C) Nurses' practices on pain management. Descriptive statistics were represented using tables, charts, and graphs.

Results: The findings revealed that majority of the participants (55%) had moderate pain management knowledge.

Conclusions: In light of the results, it is recommended that an ongoing education and training program be established to ensure that all nurses are well informed and equipped with pain management skills.

Key words: Pain management, Intensive Care Unit, Nurses, Knowledge, Practice

xxxii. The knowledge about self-care management of common minor disorders (nausea, and vomiting) among pregnant women at Referral hospital, Antenatal Clinic in Khomas Region, Namibia

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Abstract

Background: Each pregnancy is unique, which may be a pleasant life experience for some pregnant women, but for some could be uncomfortable and uneasy. The demands of pregnancy place a pregnant woman under great deals of anatomical, hormonal and physiological changes to adapt and support the pregnancy. However, these changes may cause some symptoms in the mother called minor disorders, therefore, good management of minor pregnancy disorders needs sufficient information on self-care management. Nausea and vomiting are among the minor disorders of pregnancy affecting approximately 75% pregnancies and has adverse effect on the mother such as dehydration, malnutrition, and emotional distress, as the women struggle to cope with the discomfort and disruption to their daily activities. Additionally, they can negatively impact the foetus by causing intrauterine growth restrictions, small for gestational age, and preterm labour which can cause further complications such as hypoglycaemia, hypothermia, and neonatal deaths. Therefore, providing pregnant women counselling on how to reduce their discomfort while also being sympathetic will help to improve their general health and well-being. Additionally, it contributes to the reduction on broader burden on the healthcare system, such as increased utilization of healthcare services and hospitalizations.

Methods: A quantitative descriptive design was employed in this study. A self-administered questionnaire was developed and used in this study.

Results: One-hundred and fifty pregnant women between 13 and 42 weeks of gestation participated in the study and completed the questionnaire in front of the researcher as competence was tested. For the purpose of this study competence was based on a knowledge score of $\geq 50\%$. The study found the majority of participants 132 (88%) competent in self-managing nausea and vomiting in pregnancy by obtaining a knowledge score $< 50\%$. However, 18 (12%) participants were found incompetent in self-managing nausea and vomiting in pregnancy by obtaining a knowledge score $> 50\%$.

Conclusion: The study found the majority of participants (88%) competent in self-managing nausea and vomiting in pregnancy. However, knowledge awareness on areas that were poorly answered such as adoption of relaxation techniques that can worsen the condition must be done.

Key words: Nausea, vomiting, minor disorders in pregnancy, self-care management.

xxxii. The Epidemiology and Spectrum Of Endoscopic Findings in Patients Referred for Colonoscopy During and Immediately after the Covid-19 Pandemic. Preliminary analysis.

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Abstract

Background: There is no previous national data set describing the spectrum of colonoscopy findings over in Namibia, nor how it varies over time. Additionally, this data set can examine the effect of the Covid-19 pandemic on patient referrals for colonoscopy in Namibia.

Methods: Three years of data (2021-2023) of patients referred for colonoscopy were analysed.

Results: Data on a total of 1268 colonoscopies were collected. During 2021 (n= 291) and 2022 (n = 431), there were very few patients referred for colonoscopy. This was attributed to the high burden that the COVID-19 pandemic had on both state and private sectors. In 2023, 546 colonoscopies were performed. This study showed that there was generally gender equality in health seeking behaviour in both the private and public sectors, in 2023, males represented 48.1% and females 51.9% of the sample. Colonoscopy findings (*private* sector patients) showed: normal lower gastrointestinal mucosa (17.7%), fresh haemorrhage (4.3%), melanosis coli (3.1%), hyperplastic epithelial features (14.7%), mixed polyps (18.9%), hyperplastic polyps (16.3%), villous polyps (3%) and adenomatous polyps (9.5%). In the *state* sector, the most frequent findings were, ulcerative colitis (3.7%), ischemic colitis (3%), Hirschsprung disease (4.9%), other carcinomas (9.6%), adenocarcinomas (23.4%) and colonic ulcers (10,1%). With regard to the different types of colitis, more colitis was found in patients over 55 years of age, with non-specific colitis having a higher incidence (4.5%), than ulcerative colitis (0.9%), and ischemic colitis (0.5%). Regarding the incidence of polyps, highest incidence was noted in those over 55 years, with mixed adenomatous / hyperplastic polyps, followed by adenomatous polyps. Earlier detection of adenomatous or mixed polyps, precursors to adenocarcinomas, was recorded in private sector where there was less adenocarcinomas and more polyp detection. State sector has more adenocarcinoma cases and less polyp detection. Colorectal carcinomas had a higher incidence in males than females, however this needs confirmatory analysis, as males represented 6.9%, and females 6.1%, of the population studied for this condition. The incidence of adenocarcinomas increases with advancing age. The distribution of colorectal carcinomas with regard to area of the colon showed that most adenocarcinomas were found in non-specified areas (27.9%), followed by rectum (23%), sigmoid colon (11.5%), ascending colon (10.3%) and multiple areas (6.75%).

Conclusion: This is the first detailed presentation of a major data set describing the spectrum of colonoscopy findings in Namibia. It should be noted that the data set spans the period during, and immediately after, the Covid-19 pandemic. Patient referral was hugely disrupted by the Covid-19 pandemic. Further analysis of this significant data set is underway and here we only present preliminary findings.

Keywords: Colonoscopy, Colitis, GIT, Endoscopy, Colon, Polyp

xxxiii. Exploring The Experiences of Patients on Coronary Artery Disease Treatment at Roman Catholic Hospital-Cardiac Center, Windhoek, Namibia

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Abstract

Background: Coronary artery disease (CAD) is a significant global health concern, contributing to high mortality and disability rates. In Namibia, CAD accounts for 7.20% of total deaths, driven by urbanization, lifestyle changes, and rising comorbidities such as hypertension, diabetes, and obesity. This study explored the experiences of CAD patients receiving treatment at the Roman Catholic Hospital-Cardiac Centre in Windhoek, Namibia, to inform improved management strategies.

Methods: Using a qualitative approach with a descriptive, exploratory, and phenomenological design, the study employed purposive sampling to select six participants. Data were collected through unstructured interviews and analysed using Tesch's qualitative data analysis method.

Results: The findings revealed two (2) main themes that are positive and negative experiences of patients on the treatment of CAD; five (5) themes and eleven (11) sub-themes. The positive experience being support system comprising family, friends and health care system, and lifestyle modification. Lifestyle changes and strong family support were found to be crucial in improving patient outcomes. The negative experiences are emotional factors including stress and pain; risk factors including comorbidities; and the consequences such as physical limitations and financial crisis. The study findings will inform the policy makers and stakeholders to develop preventative and management strategies that will enhance patient outcome.

Conclusion: Patients on coronary artery disease treatment have both negative and positive experiences that affect various aspects of their life and influence outcome. The study recommends educational programs and nationwide public health campaigns to raise awareness about CAD symptoms, risk factors, and prevention strategies.

Keywords: Coronary artery disease, lifestyle changes, patient experiences, treatment.

xxxiv. Knowledge of women of reproductive age regarding prevention, screening, and treatment of cervical cancer in Otjozondjupa region, Namibia

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Abstract

Background: Cervical cancer refers to hyperplasia of cells on the surface of the cervix, such as after being infected with human papillomavirus. Existing literature revealed that a significant number of women lack knowledge about cervical cancer and available services therefore did not seek cervical screening services. Knowledge regarding prevention, screening, and treatment of cervical cancer among women of reproductive age in the Otjozondjupa region is not known. The aim of this study was to determine the knowledge of women of reproductive age in Otjozondjupa region regarding prevention, screening, and treatment of cervical cancer, Namibia.

Methods: Quantitative, descriptive, and cross-sectional analytical designs were utilised. Population was women of reproductive age. Multistage stratified random sampling method was used to select the respondents. The data was collected from 394 respondents, using self-administered structured questionnaire from July 2019 to September 2019. Data were analysed using Statistical Package for Social Science Version 25. Pearson Chi-Square test was performed to determine the relationship among the variable of interest. The p value of 0.05% was used as the level of significance.

Results: The study results revealed that 88.3% of the respondents have low level of knowledge regarding prevention, 87.5% of the respondents have low level of knowledge on screening, and 65.4% indicated low level of knowledge on treatment of cervical cancer. There was an association between age and knowledge on cervical cancer ($p < 0.01$); between educational level and knowledge on cervical cancer ($p < 0.00$); between employment status and knowledge on cervical cancer ($p < 0.01$); between marital status and knowledge on cervical cancer ($p < 0.03$). The Pearson correlation in this study revealed that there is a highly positive correlation ($r = 0.726$) between general knowledge and prevention of cervical cancer, with a strong significance at ($p = < 0.001$).

Conclusion: The study identified that majority of the respondents had low level of knowledge regarding prevention, screening, and treatment for cervical cancer. Therefore, training program is recommended to empower women of reproductive age with knowledge regarding screening, prevention, and treatment of cervical cancer in Otjozondjupa region.

Keywords: Knowledge, prevention, screening, treatment, cervical cancer, women

xxxv. Clinical Profile, Physiotherapy Rehabilitation and use of Outcome Measures in Spinal Cord Injury Patients in Namibia: A Three-Year Retrospective Descriptive Study

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Abstract

Background: Namibia reports more than 5,000 injuries from motor vehicle accidents (MVAs) annually, many of which are spinal cord injuries (SCI) (Economist, 2013). Understanding the clinical profile of SCI patients is crucial for providing appropriate clinical and community support, guiding resource allocation and enhancing intervention outcomes (Chowdhury & Chakraborty, 2017). Effective rehabilitation of SCI patients requires a multi-disciplinary approach, including physiotherapy and the use of standardized outcome measures (OMs), to ensure optimal practice (Glinsky & Harvey, 2022). However, there is lack of data regarding the clinical and rehabilitation profile of SCI patients in Namibia. The study aimed to determine the clinical profile of SCI patients, identify the OMs used, and profile the physiotherapy management during rehabilitation.

Methods: This three-year retrospective descriptive study examined 68 records of SCI patients admitted to the spinal unit at Windhoek Central Hospital (WCH) for rehabilitation. A total sampling method was used, and a self-developed data collection tool was applied. Statistical analysis was conducted using SPSS. The mean age of participants was 36.59 years. Males comprised 72.1% of the population, and paraplegia was the most common SCI type. Traumatic causes accounted for 86.8% of cases, with MVAs responsible for 45.6% of these. The majority of patients were assessed using the American Spinal Injury Association (ASIA) Impairment Scale, and all participants received physiotherapy management. The five most frequently administered physiotherapy interventions included: upper limb strengthening exercises, bed mobility exercises and balance training, lower limb weight-bearing activities, joint mobilizations, and transfer training.

Results: Although most patients were assessed with the ASIA, this was done on average once only, while standard practice requires periodic repetition to monitor changes in neurologic function. Therefore, fewer than half of the participants were assessed using internationally recommended OMs, such as the ASIA and Spinal Cord Independence Measure (SCIM). This highlights a gap in physiotherapy assessment practices in WCH. Most patients received a combination of multiple physiotherapy techniques, demonstrating a comprehensive and individualized approach to rehabilitation.

Conclusion: The clinical profile of SCI patient in Namibia is consistent with literature, but there is a need to implement standardized rehabilitative assessment protocols in WCH spinalis unit.

Keywords: Spinal cord injury, Outcome measure, Physiotherapy management

xxxvi. Knowledge, Attitudes, And Practices on Infertility Among Adults Visiting the Gynaecology and Urology Clinics at Intermediate Katutura Hospital And Windhoek Central Hospital, Namibia

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Abstract

Background: Infertility is one of the global burdens, an under-observed but significant health problem affecting one in four couples in developing countries. In Namibia, about 15% of couples struggle with infertility. The study aims to assess knowledge, attitudes, and practices on infertility among adults visiting the Gynaecology and Urology clinics at Intermediate Hospital Katutura and Windhoek Central Hospital in Windhoek, Namibia.

Methods: A convergent parallel mixed method approach was used in this study. A total number of 118 respondents were recruited to fill in the questionnaire and 18 interviews were held.

Results: The study discovered that the knowledge on infertility is limited, 37.1% do not identify infertility as a disease and 75.2% believe contraceptives cause infertility. Participants believe witchcraft and curses cause infertility. Seeking medical services is listed as the initial option when struggling with infertility. Adoption and in vitro fertilisation (IVF) are acceptable options when struggling with infertility. Knowledge of infertility is limited among respondents, and the misconception about contraceptives is widespread. An average practice on infertility is noted and the act of assigning blame for infertility is widespread in various communities. Raising awareness of infertility is recommended to increase infertility knowledge, reduce stigma, and create awareness.

Conclusion: Dedicated fertility clinics in state hospitals are required to offer specialised services to individuals struggling with infertility. Research recruiting individuals dealing with infertility is encouraged, to understand their experiences better. The misconceptions of contraceptive usage leading to infertility need to be tackled through health campaigns.

Keywords: knowledge, attitude, practice, infertility, contraceptives, In vitro fertilisation

xxxvii. Prevalence of Temporomandibular Disorders Among Students at Hage Geingob Campus of the University of Namibia: A Cross-Sectional Study

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Abstract

Background: Temporomandibular joint disorders are conditions affecting the jaw muscles, temporomandibular joint, and associated nerves, often leading to chronic facial pain. They are the leading cause of dysfunction in the temporomandibular region, and the second most common musculoskeletal pain disorder, affecting approximately 33% of the average population. The objective of this study aimed to assess the prevalence of temporomandibular joint disorder symptoms among students at Hage Geingob Campus and explore variations in clinical presentation and etiological factors contributing to TMD cases.

Methods: This cross-sectional study was conducted among 155 students at Hage Geingob Campus using an online questionnaire based on Fonseca's Anamnestic Index (FAI). The questionnaire collected demographic data and assessed TMD symptoms to determine prevalence and severity. Data was gathered over one month and analyzed using Microsoft Excel.

Results: The study found that 59.35% of participants exhibited signs of TMD. Using the Fonseca Anamnestic Index as a reference, 40.65% were classified with no dysfunction, 46.45% with mild dysfunction, 9.68% with moderate dysfunction, and 3.23% with severe dysfunction.

Conclusion: This study revealed a high prevalence of mild TMD among participants, highlighting the need for further research. Expanding the focus to students from different academic fields and institutions would provide a broader understanding of TMD prevalence and its contributing factors.

Keywords: Temporomandibular joint disorder (TMD); Prevalence; Fonseca's anamnestic index; Jaw dysfunction; University students.

xxxviii. Emotional and Psychological Well-Being of Postgraduate Nursing Students in High-Stress Emergency Setting at Intermediate Hospital Katutura, Khomas Region

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Abstract

Background: Globally, a study conducted by the International Council of Nurses found that 50% of nurses reported feeling moderately to extremely stressed out at work every day. In Namibia, research on the emotional and psychological health of postgraduate nursing students in high-stress emergency situations has drawn a lot of attention. Approximately 45–60% of nursing students report high levels of stress during their education, with clinical placements being a major source of stress. Objectives of the study were to explore and describe the emotional and psychological well-being of post graduate nursing students in high stress at Intermediate Hospital Katutura Emergency Department.

Methods: A phenomenological, explorative and descriptive design was followed as the basis for conducting the study. The data was collected through in-depth interviews conducted at an intermediate hospital Katutura. A sample of ten (10) participants was selected using a purposive sampling technique. The sample size was determined by saturation of data as reflected in repeating themes.

Results: The majority of participants reported to have bad experiences during their clinical practices, while some postgraduate nursing students improved their skills, and exposure described it as an awarding opportunity. Assess the training practical for postgraduate nursing students during their clinical allocations at emergency unit to identify areas of improvement between the training hospital and the university.

Conclusion: At least 80% of the nursing students in high stress setting emergency unit should go through orientation prior to their allocations to familiarise themselves with the environment.

Keywords: Emotional, Psychological, High stress setting, Postgraduate nursing students and Emergency unit.

xxxix. The challenges social workers face when dealing with individuals living with mental problems in Namibia

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Abstract

Background: The World Health Organization (2023) reports a concerning global trend, noting a 13% rise in mental health issues and substance use disorders over the past ten years. In Namibia, the suicide rate stands at a troubling 9.7 per 100,000 people, making it the fourth highest in the world and highlighting the urgent need for mental health services in the country (World Health Organization, 2022). Social work services are important, as they provide psychosocial support and counselling, psychoeducation, advocacy, community mental health care etc. to address the challenges regarding the quality of life of mentally ill patients (Online FSU, 2023). However, most social workers are lacking adequate training in the specialised field of mental health and psychiatry for social workers (Thanises & Meshelemiah, 2023). Rukambe (2019) established significant gaps between knowledge and practice among social workers in the mental health settings. Thus, the aim of the study was to explore the challenges social workers face when dealing with individuals living with mental problems in Namibia and objectives were to explore social workers' understanding and specialized knowledge about mental health; the challenges faced by social workers when working with mental health clients and how mental health services can be improved.

Methods: A qualitative single-case study methodology was chosen. The sample consisted of social workers in the mental health setting. A purposive and snowball sampling techniques were followed. A semi-structured interview guide was used to collect data from individual interviews.

Results: The key challenges that were identified in the research included, a lack of specialised knowledge and skills in working with people living with mental health conditions. The lack of in-service training and Information Education and Communication (IEC) materials to be used by social workers when doing psychoeducation and or community mental education. The none-adherence of patients to medication, due cultural beliefs, makes psychoeducation a challenge for social workers. Clients' beliefs and views about therapy influence their recovery process' making it difficult for social workers to properly and effectively work with clients. The recommendations that were suggested were that tertiary institutions should introduce a specialised training program in social work. There should be Cultural/spiritual sensitive training for social workers to work effectively work with the clients. There should be workplace Professional Development opportunities for social workers in the field of mental health.

Conclusion: Increase multidisciplinary training and workshops of social workers with other professionals working in mental health settings to strengthen collaboration. Increase the production of diverse IEC materials for psychoeducation and awareness campaigns. There should be an increase in preventative campaigns in communities to reduce stigma and non-adherence.

Keywords: Mental health, Social workers, Stigma, Challenges, Specialized knowledge

xl. Perspectives of People Living with Human Immunodeficiency Virus Regarding the Integration of Their Care into Primary Health Care Services in Okankolo Health Center, Onandjokwe District, Oshikoto Region, Namibia

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Abstract

Background: HIV/AIDS services being integrated with primary health care means that the health facility acts as one department, there is sharing resources, the space, staff, registers and operating rooms, instead of each department with its own staffs and equipment. Implementation of integration system at health facilities was introduced in Namibia to fight against stigma and discrimination among people living with HIV/AIDS. Many facilities in Namibia are operating in an integrated system. However, little is unknown on the perspectives of people living with HIV/AIDS regarding the integration of HIV care into primary health care services. As a result, this study was conducted to explore the perspectives of People Living with HIV (PLHIV) regarding the integration of HIV/AIDS care with existing Primary Health Services in Okankolo Health Centre (OHC), Onandjokwe District, Oshikoto Region, Namibia. Objectives of the study were to explore and describe the perspectives of PLHIV as well as to discover what inputs PLHIV have on integration of the two services.

Methods: A research approach of qualitative with a phenomenological, descriptive and contextualized design was used during the study. Interview guide, an audio recorder and field note were used during in-depth face-to-face interview. Participants were adults both male and female between the age of 18 and 50 and have been collecting their Anti-Retroviral Treatment (ART) medication at Okankolo Health Centre before and after integration system. Participants were selected purposively and were interviewed. Data saturation was reached at the 9th participant. Tesch's eight steps of coding were used to analyse data. Three themes and eight sub-themes emerged from the study.

Results: The study findings show that people living with HIV at Okankolo Health Centre are comfortable with integration system, but they still face negative challenges such as bad attitudes from nurses, long waiting time at the facility and lack of privacy at the Pharmacy. Participants therefore recommended improvement to be made to these challenges.

Keywords:

Perspectives, Integration, People living with HIV/AIDS, Primary health care

xli. Relationship Between Gratitude and Perceived Stress Among Unam Undergraduate Students

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Abstract

Background: University life is a crucial period marked by high academic demands, transition and social adjustments. While this phase nurtures intellectual and emotional development, it is also linked to high levels of stress, which can negatively impact students' well-being as well as their academic performance. Understanding and researching different factors that might reduce stress levels is vital in promoting students' mental health. Gratitude, a construct in positive psychology, is defined as the ability to recognize and appreciate positive experiences and being thankful for them. Some studies suggest that gratitude could alleviate stress and serve as a shield against it. There is however very little research that has explored this relationship among university students, especially within the Namibian context. This research aimed to discover the existence of a relationship between gratitude and perceived levels of stress among undergraduate psychology students at the University of Namibia (UNAM).

Methods: A total of 204 undergraduate psychology students at the main campus of UNAM participated in this cross-sectional study. The data for this research was collected using a Biographical Questionnaire, designed by the researcher, the Gratitude Questionnaire-Six Item Form (GQ-6) and the Student Stress Rating Scale (SSRS).

Results: Through the use of SPSS version 29, the findings revealed a weak positive correlation between gratitude and stress ($r = 0.11$, $p = 0.11$) among this sample. This suggests that higher gratitude levels were not considerably associated with lower stress levels and vice versa. Furthermore, students exhibited low levels of gratitude ($M = 34.77$) and moderate levels of stress ($M = 4.36$). These research findings illuminate the need for universities to implement interventions to support students' mental well-being, specifically to reduce stress levels and increase levels of gratitude among students as a psychological resource. Interventions such as mindfulness training, gratitude journaling and structured workshops may help students develop adaptive coping strategies to their vital developmental years at university.

Conclusion: To fully explore the relationship between gratitude and stress as well as other factors that may influence these concepts among university students, further research is recommended.

Keywords: gratitude, stress, undergraduate psychology students, University of Namibia

xlili. Enhancing Mental Health with Artificial Intelligence

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Abstract

Background: The integration of Artificial Intelligence (AI) into mental health support within the workplace demonstrates considerable potential for improving employee well-being and boosting productivity. This study is set to investigate the potential of using AI to improve the mental health of employees within the organisation, particularly looking at AI-interventions that could assist with stress management, employee engagement and the early detection of burnout. This study will therefore explore how using AI tools can be used to monitor the mental health of employees and produce personalised interventions for individual cases. We present preliminary results only.

Method: This study will use a mixed-method approach through the means of questionnaires, focus groups and the analysis of workplace data of anonymised AI-powered platforms which are used to track employee well-being and engagement. The sample population will consist of various industries, HR professionals and organisational psychologists.

Results: The study has commenced, and preliminary results suggest that the use of AI tools to improve mental health in the organisation have been found to improve employee well-being and boost productivity.

Conclusion: This study will provide insight on the transformative potential of AI in promoting mental health within the workplace to ensure the well-being and engagement of employees.

Keywords: Artificial Intelligence, mental health, well-being

xlili. Dark triad personality traits and the impact on organisational culture. The case in selected state entities

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Abstract

Background: Dark triad personality traits affect the organisational effectiveness and productivity. However, the effects on these dark personalities in the state entities is relatively unknown. Narcissism, Machiavellianism and psychopathy are known to impact on organisational culture. Dark triad personalities are not only at the centre of toxic workplaces, but impact greatly on organisational culture. Literature affirms that leaders with these dark attributes generate setting of dread of mistrust and poor employee morale. These dark personalities also increase organisational turnover intentions and under cooperation and collaboration which are eminent to productivity. Furthermore, leaders with dark triad personality traits encourage harmful work behaviours. The study seeks to explore the impact of dark triad personality traits on organisational culture in a selected state entities in Namibia.

Methods: a cross-sectional survey approach will be used to collect data from a large sample at one time, and the sample of the study will be 200 employees of state entities. Furthermore, a stratified random sampling will be used where employees will be divided by their leadership level, educational level, tenure, gender, and age.

Conclusion: Findings from the study will provide an insight on how the organisation may deal with individuals with these dark traits and further develop policies which will guide the human resources processes, especially on recruitment and selection, training and development, and lastly performance management. The study will commence shortly.

Keywords: personality, dark triad personality traits, organisational culture, productivity

xliv. **Psychosocial Effects of Covid-19 Pandemic on 2020 Public Health and Nursing Students at University of Namibia-Oshakati Campus, Oshana Region, Namibia**

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Abstract

Background: The research project motivation is to determine the psychological and social repercussions of COVID-19 pandemic on 2020 intake of public health and nursing students at Oshakati campus of the University of Namibia, in Oshana region, Namibia and identify their coping strategies against psychosocial effects.

Methods: A project approach of qualitative in nature was implemented for conducting the study through a phenomenological study design. Seventeen (17) participants were selected purposefully from 156 targeted population of public health and nursing students. The data of the research were collected through a recorded comprehensively interview of face-to-face and field notes, manually analysed, and interpreted.

Results: Study findings indicated that psychological and social effects are interrelated aspects which can influence one another in connection with COVID-19 pandemic. The study finding shows that stress, anxiety, loneliness, and depression are major psychological effects due to COVID-19 pandemic measures and online study. Poor social interaction and financial crisis are social effects which contributed to psychological effects as well. Findings further show that self-management (physical activities, hobbies, adhere to regulations, and staying positive), spiritual (religious) and social support (from family members, friends, and health professionals) are coping mechanisms to overcome psychosocial effects of COVID-19 pandemic.

Conclusion: Psychological and social effects are interrelated aspects which can influence one another in connection with COVID-19 pandemic.

Keywords: Psychosocial Effects, Coping Strategies, COVID-19 Pandemic

xlv. Exploring unemployment experiences, coping strategies and well-being in youth in Rundu

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Abstract

Background: Unemployment amongst the youth in Namibia can have detrimental effects on the quality of life of youth, on national and political peace, stability, and economic growth. Indeed, work has been identified to be an important factor, amongst others, contributing to the meaningful living of an individual. High rates of unemployment, therefore, may be a possible psychological stressor that may increase the risk of mental disorders in the community.

Methods: This study explored the experience of unemployment amongst the youth in Rundu, a town situated in a region with one of the highest youth unemployment rates, in relation to their wellbeing and their coping strategies. For the current study, the unemployed comprise all those above a specific age who were without work during a particular reference period, were available for paid employment or self-employment, and had taken active steps to seek paid employment or self-employment. A qualitative approach, which included a phenomenological design, was adopted. Overall, 14 participants (43% females, 57% males, with a mean age of 27.2 years old) were recruited through a purposive and snowball sampling techniques and interviewed on a face-to-face basis. The study employed thematic analysis using an inductive coding process.

Results: Participants experienced unemployment as distressful and difficult to deal with. The study further revealed that being unemployed resulted in a lack of structure in the daily life of unemployed youth and a decay in their social relationships. Despite the negative emotions attributed to being unemployed, most participants adopted emotion-focused coping strategies and remained hopeful of employment prospects. Negative coping strategies include self-isolation and social withdrawal, driven by a need to avoid the stigma associated with being unemployed.

Conclusion: These findings suggest that it is essential to foster graduate trainee programs and approach the unemployed in a compassionate manner to avoid harming their already-threatened self-esteem.

Keywords: Youth unemployment, mental health, well-being, thematic analysis, Rundu

xlvi. **Antimicrobial, time-kill kinetics and biofilm inhibition properties of *Diospyrus lycioides* that is used as a chewing stick in Namibia**

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Abstract

Background: Medicinal plants are used in Namibia for oral hygiene and to treat oral diseases. Validating the content and efficacy of medicinal chew sticks used in communities helps to provide proof of concept of medicinal plants used as complementary/alternative medicine for oral diseases. This study presents the first report on quantified phytoconstituents, antimicrobial, time-kill kinetics, and biofilm inhibition properties of *Disporus lycioides* organic and aqueous extracts against *Enterococcus faecalis*.

Methods: Dry plant materials were ground into powder and macerated in methanol and distilled water. Different phytoconstituents were quantified by Folin-CIO calteu colorimetric method, ferric reducing antioxidant power assay, and DPPH free radical scavenging. An antibacterial assay was performed using a well diffusion method and a resazurin 96 well-based assay. Kill time assay was done at various concentrations over 4 hours. Biofilm inhibition was carried out using the crystal violet method.

Results: Higher total flavonoid, total phenol contents, and free radical scavenging abilities were reported in methanol twig extracts. A minimum Inhibitory concentration of 15.6±0.00 µg/mL, was reported against *E. faecialis*. The bactericidal endpoint of *D. lycioides* organic extracts for *E. faecialis* was reached after 4 h of incubation at 8× MIC (124.8 µg/mL). These were comparable to the positive control, gentamycin. The organic extracts showed ≥ 50% biofilm inhibition against root canal infecting *E. faecialis* at concentrations between 7.8-500 µg/ml, indicating strong biofilm inhibition.

Conclusion: The study demonstrated that *D. lycioides* crude extracts have promising antibacterial properties and can eradicate *E. faecalis* biofilms. Further studies should be conducted to evaluate the safety and efficacy *in vivo*.

Keywords: Antioxidants; Antibacterial activity; Kill time; Biofilm inhibition

xlvi. An Exploration of The Understanding of Mental Health: A Case Study of The Ovaherero Community, Opuwo Urban Area, Namibia

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Abstract

Background: Mental health practitioners in Namibia may deal with clients from multicultural backgrounds. There is therefore a need to understand how culture influences clients' expressions of psychological distress, and a need for culturally appropriate interventions. The aim of the study was to identify cultural understandings of mental health and illness within the Ovaherero community of Opuwo, Kunene region.

Methods: The study utilised a qualitative approach with an ethnographic design. The population of this study comprised of the adult Ovaherero-speaking population from Opuwo, Kunene region, within the age range of 18 years and over. Fifteen participants took part in the study selected through convenience and homogeneous sampling. Data was collected with a short socio-demographic questionnaire and semi-structured interviews developed by the researcher using literature on culture and mental health. Thematic analysis was used in this study.

Results: The results indicated that mental illness is perceived not merely as a medical condition but as a manifestation of spiritual, social, and moral dimensions. This perception is deeply rooted in traditional beliefs that attribute mental illness to external spiritual forces such as witchcraft and ancestral curses. The study also revealed that mental illness is often linked to moral and social transgressions, with some participants viewing it as a form of punishment for violating cultural norms or taboos. The identification of behavioral indicators such as aggression, disorientation, and neglect of personal hygiene illustrates expressions of mental illness within the communities. Demographic variations in the perception of mental illness were also observed, particularly concerning age and gender. Mental illness is perceived to disproportionately affect males aged 25-40, who face intense social and economic pressures. The findings highlighted the complex interplay between traditional and non-traditional perspectives, which shape the community's approach to mental illness.

Conclusion: This interplay underscores the importance of developing culturally adapted mental health interventions that respect traditional practices while incorporating modern medical approaches. Such interventions should consider both the strengths and limitations of traditional healing practices, enhance the accessibility of professional mental health services, and promote a more comprehensive understanding of mental health that acknowledges the influence of socio-cultural, psychological, and biological factors.

Keywords: cultural understandings, mental health, Ovaherero community, ethnographic design, traditional beliefs, mental health interventions

xlvi. Ubuntu Philosophy as a Transformative Pedagogical Approach for Advancing Planetary Health in Nursing Education

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Abstract

Background: The health of our planet is inseparable from human well-being, and the escalating effects of climate change call for a fundamental shift in nursing education. Traditional Western frameworks often prioritize individual health outcomes, overlooking the vital interconnectedness between human and planetary health. This article advocates for Ubuntu, an African philosophy rooted in communal well-being and ecological stewardship, as a transformative pedagogical approach to advancing planetary health in nursing education within the Anthropocene era.

Methods: Guided by McCullough's framework, this argumentative literature review examines how Ubuntu's values can be harnessed to promote climate sustainability and social justice in nursing curricula.

Results: Drawing on supportive theoretical frameworks and six purposively selected studies focused on Ubuntu, climate change, the Anthropocene, planetary health, social justice, and pedagogy, this study argues that Ubuntu as a pedagogy provides a humanistic, ecologically conscious model that prepares nursing students to advocate for both social and environmental justice.

Conclusion: By integrating Ubuntu's principles, nursing education can cultivate practitioners who are not only skilled clinicians but also compassionate advocates for climate action and equity, fostering a healthcare system that prioritizes resilience and sustainability amid global environmental challenges.

Keywords: argumentative review; climate change; nursing education; Planetary Health; transformative pedagogy; Ubuntu

xlix. Knowledge, attitudes, and practices on hypertension among the health science faculty and students at the University of Namibia

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Abstract

Background: Hypertension is a serious health concern, especially in developing countries, and assessing people's knowledge, attitudes, and practices (KAP) is important for its awareness and management.

Methods: This cross-sectional study aimed to assess the KAP on hypertension among students and staff from the Health Sciences and Veterinary Medicine Faculty of the University of Namibia. A cross-sectional study design was conducted on adult participants who completed the KAP questionnaire while resting, and thereafter their blood pressure (BP) was measured. This study was conducted in September 2023.

Results: The sample comprised 99 participants (77 females and 22 males) aged 18 to 64 years. The majority (94%) of the participants had normal BP ($\geq 140/90$ mm Hg). The systolic BP of females (113.13 ± 13.70 mm Hg) was significantly lower ($P = .011$) than that of males (121.64 ± 13 mm Hg); however, there was no significant difference in diastolic BP between the 2 genders (73.58 ± 9.37 for females and 75.95 ± 10.55 for males; $P = .311$). Approximately 85% of the participants demonstrated a good understanding of the risk factors associated with hypertension. About 91% of the participants believed that hypertension is a serious health problem and were willing to change their daily routine to better manage their blood pressure. Only approximately 39% of the participants regularly monitored their BP. Just above 50% of the participants regularly engaged in physical activities and made dietary modifications to maintain a healthy heart.

Conclusion: Hosting regular hypertension campaigns among health science personnel is important, as this would help refresh and improve their KAP in prevention and management.

Keywords: Attitudes, Hypertension, Knowledge, Namibia, Practices

I. An Assessment of Women's Satisfaction with Maternity Care During Labor and Birth in a Referral Hospital in Namibia

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Abstract

Background: The experience of childbirth can be marred by disrespect and abusive behaviours from maternity care providers, compromising the well-being of women during this critical time. This study aims to gauge women's perceptions and assess their satisfaction with maternity care provided at a referral hospital in northeastern Namibia, highlighting the need for improved care standards.

Method: Conducted over two months from March to May 2024, this quantitative cross-sectional study engaged 300 women aged 18 to 45 years who were randomly selected from the postnatal ward. Utilizing SPSS for data analysis, we applied descriptive statistics and Chi-square tests with a significance threshold set at $p < 0.05$, ensuring robust findings.

Results: The survey achieved an impressive 100% response rate. With a mean participant age of 27 years ($SD \pm 6.04$), our results indicated that 73% ($n=220$) experienced a Normal Vertex birth, while 27% ($n=80$) underwent caesarean sections. A remarkable 98% of respondents expressed satisfaction with the maternity services, with 94% indicating they would recommend the facility to others. Key factors influencing satisfaction included respect for women's choices, cultural sensitivity, privacy, and the supportive demeanour of maternity care providers ($p < .001$). Importantly, no significant links emerged between satisfaction levels and the birth method or participant age.

Conclusion: Our findings reveal a strikingly high level of satisfaction among women receiving maternity care at this referral hospital. This satisfaction is intricately linked to their willingness to recommend services to others, emphasizing a vital area for improvements in maternal health care. Future research should focus on the perspectives of maternity care providers and birth companions to further refine and enhance care quality.

Keywords: Maternity, Labour, Birth, Satisfaction, Women

li. **An assessment of the knowledge and attitude of exclusive breastfeeding among nursing mothers at an Intermediate hospital in the Khomas region, Namibia**

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Abstract

Background: The United Nations Children's Emergency Fund (UNICEF) and the World Health Organisation (WHO) strongly recommend EBF for the first six months of life, during which the newborn should not be given any other food or liquids—not even water, and this practice is referred to as exclusively breastfeeding (EBF). Exclusively breastfeeding is recommended because it provides newborns with adequate nutrition, leading to better growth and development both physically and mentally and offering protection against infectious diseases. Additionally, EBF has many benefits for the nursing mothers, which include lowering incidence rates of postpartum haemorrhage, acting as a family planning method, and protecting against type 2 diabetes, breast, uterine, and ovarian malignancies. However, despite the strong recommendations of EBF across the globe and in particular Namibia, EBF practice remains low. The Ministry of Health and Social Service reported in 2018 that 55% of babies from 0 to 6 months were not exclusively breastfed, which is below the global target of 70% by 2030. Hence, it was imperative to investigate the knowledge and attitudes of EBF among nursing mothers at Intermediate Hospital in the Khomas region, Namibia.

Methods: A quantitative descriptive research design was employed in the study. A self-administered questionnaire was developed and used in this study. One hundred and fifty nursing mothers who came for a six-week postnatal visit at the study setting participated in the study by completing the questionnaire in front of the researcher.

Results: For the purpose of this study competence was based on a knowledge score of $\geq 50\%$. The study found most participants 90 (60%) competent about the benefits of EBF. However, a lower positive rate towards EBF was noted $n=71$ (47%).

Conclusion: Though the majority of participants (60%) were found to be competent about the benefits of EBF, the study still recommends strong knowledge awareness on the benefits of EBF to be imposed at all entry points of maternity departments for Namibia to attain the global targets of 70% by 2030. The researchers in this study believe that a good knowledge level will improve the positive attitude rates towards EBF among nursing mothers.

Keywords: Knowledge, Attitude, Exclusive Breastfeeding, Nursing Mother

lii. **Assessment of The End User Computer Satisfaction of The District Health Information System (Dhis2) Used at Windhoek Central Hospital Complex**

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Abstract

Background: Measuring end-user computing satisfaction (EUCS) contributes significantly to the promoting and assessing of specific health information needs and desired health outcomes in hospital information systems. The study aimed at assessing the EUCS of the District Health Information System (DHIS2) at Windhoek Central Hospital.

Methods: An explorative, descriptive study design using the modified Delphi technique, a three-staged survey and a validated instrument developed by Doll and Torkzadeh's was employed. Thirteen health data managers were conveniently sampled using three rounds of interviews with experts, to measure EUCS both qualitatively and quantitatively. Data was analysed using themes and Microsoft Excel.

Results: The five dimensions of EUCS such as content, accuracy, format, ease of use, and timeliness were used as guiding variables for this study. Although the study findings suggested that the majority (92%) of the participants were not involved in the design and development process of DHIS2, a high level of satisfaction with the system was reported during the situational analysis. In addition, the Pearson Chi Square (14.702; p-value 0.005) and Likelihood Ratio (15.172; p-value 0.004) confirmed that end-users are significantly satisfied with the format with which the output is presented and ease of use of the system. Increased reporting rate and improved timely reporting were revealed as some of the net benefits of DHIS2.

Conclusions: Establishment of a DHIS2 community of practice in Namibia; capacity building on data analysis packages and the ability of the system to with intermittent internet connectivity are recommended by this study.

Keywords: End-user computing satisfaction (EUCS); District health information system version 2 (dhis2); Hospital information systems (his); User satisfaction; Namibia.

liii. **Theatre nurses' knowledge of surgical plumes and its health effects: a quantitative study at Lady Pohamba Private Hospital**

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Abstract

Background: Surgical plume (diathermy plume) is a by- product that comes from electrosurgical instruments when cutting, vaporizing or coagulating tissue during surgical procedures. The existing literature has found that the smoke generated through the use of electrosurgical equipment contains gaseous and particulate composites, and may contain dangerous chemicals, tumour fragments and infective material. However, theatre nurses' knowledge on plume and its health effects remains unresearched. Therefore, the aim of this study was to determine the nurses' knowledge of surgical plumes and its health effects among theatre nurses of Lady Pohamba Private Hospital.

Methods: A quantitative descriptive, cross-sectional, and analytical designs was applied, utilizing a structured questionnaire to collect data from 46 theatre nurses at Lady Pohamba Private Hospital. A census sampling was used since the study population was small. Data were analysed using Statistical Package for Social Science Version 27 and simple Chi-Square test was performed. The level of significance was 0.05%.

Results: Most of the respondents 40 (87%) were female while 6 (13%) were male. Exactly 26 (56.5%) were registered nurses, while 20 (43.5%) were enrolled nurses. The study results revealed a good level of knowledge among theatre nurses about surgical plumes, with 87% identifying surgical smoke as surgical plumes while 63% had prior heard of surgical plumes. Most nurses recognized the health risks associated with exposure, particularly respiratory issues like emphysema and bronchitis, with 82.6% acknowledging that surgical plumes contain harmful compounds. Pearson correlation revealed that correlation between qualification level and knowledge of surgical plume effects is very weak and statistically insignificant ($r = -.013$, $p = .932$), thus, suggesting that higher or lower qualifications do not necessarily predict knowledge levels or perceptions of the effects among the theatre nurses.

Conclusion: While theatre nurses possess a foundational knowledge of surgical plume health risks, there are gaps in awareness of knowledge on health effects. Thus, training is required to increase awareness among theatre nurses regarding surgical plumes and their health effects. It is recommended that training programs addressing comprehensive health risks related to surgical plumes be enhanced to ensure consistent understanding and promote safety in theatre environments.

Keywords: Knowledge, Surgical plumes, health effects, theatre nurses

liv. An Assessment of Third, Fourth- And Fifth-Year Undergraduate Students' Perceptions of Research at Hage Geingob Campus

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Abstract

Background: Students at Hage Geingob Campus have been carrying out research projects ever since the UNAM medical school came into existence. The objective of the study was to determine the perceptions of research among undergraduate students at Hage Geingob Campus and establish the difference in perceptions of research between the third, fourth- and fifth-year undergraduate students.

Methods: A descriptive cross-sectional study was carried out at Hage Geingob among 217 third, fourth- and fifth-year undergraduate students. An online questionnaire with 10 questions was shared with the participants to assess their perceptions of research using 5-point Likert scale. Proportionate stratified random sampling techniques were employed, and IBM SPSS Statistics (Version 25) software was used in carrying out the data analysis.

Results: 217 students were contacted to take part in the study but only 140 (65%) students took part in answering the questionnaire. With regards to the compulsory nature of the research, 81(58%) students agreed that the research project should be compulsory. 88(63%) students think it is important to do research in undergraduate studies, whilst 20 (14%) of the students were neutral and 32(23%) students disagreed that it is important to do research during undergraduate studies. Interest in doing research was greater with fifth year students and lower with third year students.

Conclusion: The study found out that majority of students think research is important, but few students expressed interest in doing research and the majority also regard it as stressful and time consuming.

Keywords: Undergraduate Students, Research

