

PROGRAMME & BOOK OF ABSTRACTS  
Faculty of Health Sciences  
and Veterinary Medicine



# Health Africa International Conference(HAIC)

*Theme:  
Advancing Health  
Equity: Bridging the  
Gaps through  
Innovation  
and Advocacy*

**07 – 08 March 2024**



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Executive Director,  
Faculty of Health Sciences and Veterinary Medicine.



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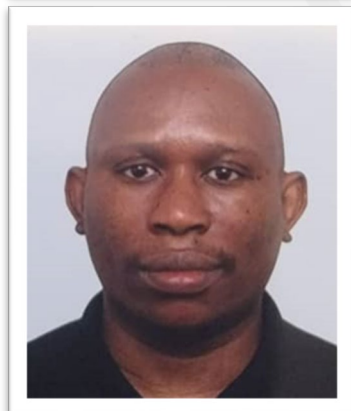
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Associate Professor – Veterinary Parasitology,  
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School of Medicine

**EDITORIAL:**

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# Programme for Research Conference

**Day 1: 07 March 2024**

Time	Presenter	Presentation Title	
<p><a href="https://zoom.us/j/98731391757?pwd=bUVrOHNLcVFmVDBaSEnrL1YzaWtUUT09">https://zoom.us/j/98731391757?pwd=bUVrOHNLcVFmVDBaSEnrL1YzaWtUUT09</a></p> <p>Meeting ID: 987 3139 1757      Passcode: 483267</p>			
Time	Presenter	Affiliation	Title of presentation
0900 – 0915hrs	Prof Judith Hall.	Executive Dean – Faculty of Health Sciences & Veterinary Medicine, University of Namibia	Welcome remarks.
0915 – 0945hrs	Prof Kenneth Matengu.	Vice Chancellor – University of Namibia	Official opening of the conference
0945 – 1015hrs	Prof Mareli Claasens	University of Namibia	Collision of the three global pandemics: the effect of tuberculosis and HIV on the epidemiological, clinical, virological and immunological trajectory of COVID-19 in Botswana and Namibia (Core-NB).
<b>SESSION 1. INFECTION, INFLAMMATION &amp; IMMUNOLOGY AND ONE HEALTH RESEARCH</b>			
<p><a href="https://zoom.us/j/98731391757?pwd=bUVrOHNLcVFmVDBaSEnrL1YzaWtUUT09">https://zoom.us/j/98731391757?pwd=bUVrOHNLcVFmVDBaSEnrL1YzaWtUUT09</a></p> <p>Meeting ID: 987 3139 1757      Passcode: 483267</p>			
Time	Author list	Affiliation	Title of presentation
1030 – 1040hrs	Yimer F.T, Sikuvi K., Hangula A, Josef M, Mutelo G, Nghitukwa N.	University of Namibia.  Ministry of Health and Social Services, Namibia.	Characteristics and outcomes of patients admitted to the intensive care units of the two main referral hospitals in Windhoek, Namibia: A prospective cross – sectional study.
1040 – 1050hrs	Haindongo E.	University of Namibia	From Africa to Namibia: Antimicrobial Resistance Trends of human clinical <i>Escherichia coli</i> and <i>Staphylococcus aureus</i> .
1050 –1100hrs	Fleermuys J.L., Namukwambi R.	University of Namibia	Effectiveness of defaulter tracing system for TB lost to follow-up patients: Narrative Literature Review.

1100 – 1110hrs	Haimbodi R., Chidumayo N.N., Sitali D.C., <u>Mkandawire E.</u>	Directorate of Veterinary Services, Namibia.  University of Zambia.	Knowledge, attitudes, practices and risk perception of cattle farmers in Namibia to antibiotics use and resistance.
1110 - 1120hrs	Simeon P., Henok L., Mulenga R, Jonkman L.	University of Namibia	Changing epidemiology and susceptibilities for bacterial meningitis in Namibia.
1120 - 1130hrs	Samkange A., Chitanga S., Mbiri P., Matomola O.C., Neves L., Matjila T.	University of Namibia.  University of Pretoria, South Africa.	Toxoplasmosis in small ruminants in Namibia.
1130 – 1140hrs	Samkange A., Mbiri P., Matomola O.C., Zaire G, Homatemi A., Junias E., Kaatura I., Khaiseb S., Ekandjo S., Shoopala J., Hausiku M., Shilongo A., Mujiwa M.L., Dietz K., Busch F., Winter C., Matos C., Sabrina Weis, Chitanga S.	University of Namibia.  Directorate of Veterinary Services, Namibia.  Friedrich – Loeffler Institute, Germany.  Robert Koch Institute, Berlin, Germany.	Serological evidence of Crimean - Congo haemorrhagic fever in livestock in the Omaheke region of Namibia.
1140 - 1150hrs	Chidumayo N.C	University of Zambia, Zambia	Estimation of <i>Brucella</i> and <i>Mycobacterium bovis</i> contamination in bovine milk in Africa.
1150 – 1200hrs	Changula K., Kajihara M., Fujioka E., Qiu Y., Ndebe J., Moonga L., Teshima Y., Mori- Kajihara A., Mwizabi D., Sambiana H., Hattori T., Nao N., Hang'ombe BM., Hiryu S., Sawa H., Takada A.	University of Zambia, Zambia.  Hokkaido University, Sapporo Japan.  The University of Tokyo, Japan.  JAMSTEC, Yokosuka, Japan.	Ecological study of Marburg viruses in Zambia.
1200 - 1210hrs	Mbiri P., Matomola C.O., Muleya W., Mhuulu L., Diegaardt A., Noden B., Changula K., Chimwamurombe P., Matos C., Weiss S., Nepolo E., Chitanga S.	University of Namibia.  University of Zambia, Zambia.  Oklahoma State University, USA.  Namibia University of Science & Technology.  Robert Koch Institute, Berlin, Germany.	Molecular detection and characterization of Rickettsia species in Ixodid ticks from selected regions of Namibia.



1210 - 1220hrs	Gabriel R.N., Nakweenda M., Shalonda S., Endjala T.	University of Namibia.	One Health approach: A perspective of health care workers in Khomas region, Namibia.
1220 - 1230hrs	Nyambe M.M., Archibong E.F.	University of Namibia.	Towards Repurposing Sesquiterpene Lactones for the Treatment of Multi- Dr.ug Resistance Gonorrhoea.
1230 - 1240hrs	Hemberger Y.M.	University of Namibia.	Status quo on the One Health concept in Namibia – conflict between tradition and development?

### Lunch Break

Update of previous FHSVM research funding.

<https://zoom.us/j/98731391757?pwd=bUVrOHNLcVFmVDBaSEnrL1YzaWtUUT09>

Meeting ID: 987 3139 1757      Passcode: 483267

Time	Author list	Title of presentation
1400 – 1410hrs	Musara C	Zoonotic potential of Ovine leptospirosis at Neudamm farm, Khomas region, Namibia.
1410 – 1420hrs	Shatri A.	Purchase of a CO <sub>2</sub> incubator for 2D and 3D cell culturing
1420 – 1430hrs	Shatri A., Bere S., Ishola A., Bouman D., Mumbengegwi D.	Purchase of A Malvern Zetasizer Nano as a High-performance Analyser Offering Enhanced Detection of Nanoparticle Physicochemical Properties.
1430 – 1440hrs	Chitanga S., Nepolo E., Haindongo E., Chinyoka S., Mbiri P.	A One Health approach towards the understanding of non- malarial fevers in humans and assessing the vulnerability of resource-limited communities in Namibia
1440 – 1450hrs	Chitanga S., Madzingira O., Chitate F., Hausiku M., Simasiku S., Thomas W.G.	A journey towards a One Health approach to surveillance and control of Schistosomiasis and Fascioliasis in Namibia: An assessment of the role of livestock and wild animals as reservoirs of infection.
1450 – 1500hrs	Chitanga S.	Purchase of gel doc viewer.

### SESSION 2. HEALTH EDUCATION

Link: <https://zoom.us/j/99704672047?pwd=eDlnRE1NYkFJSlo3bENaQnhPREsrUT09>

Meeting ID: 997 0467 2047      Passcode: 883468

Time	Author list	Affiliations	Title of presentation
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1030 – 1040hrs	Drotsky L., Shumba T.W.	University of Namibia.	Fetal Alcohol Spectrum Disorder: A Targeted community centred prevention strategy for Namibia.
1050 – 1100hrs	Haifete A.N., Chironda G., Brysiewicz P.	University of Namibia. University of KwaZulu-Natal, South Africa.	A Scoping Review of Nurse-Led Medical-Surgical Knowledge Translation Interventions to improve in-Hospital clinical practice in WHO Afro-region.
1100 – 1110hrs	Katangolo-Nakashwa N., Mfidi F.H., Thupayagale-Tshweneagae G.	University of South Africa.	Stakeholder Dynamics and Policy Implementation: A Comprehensive Analysis of School Health Policies in Namibia.
1110 - 1120hrs	Mahoto S., Katangolo-Nakashwa N., Newaka E.	University of Namibia. University of South Africa.	Development of a smoking cessation counselling algorithm for health care workers in Zambezi region, Namibia.
1120 - 1130hrs	Shivute P., Shilumba M.	University of Namibia.	Knowledge and Adherence to radiation protection among non-radiation Health Care Workers (HCWs) at two operating theaters in Windhoek, Namibia.
1130 – 1140hrs	Gerda Botha	Sefako Makgatho Health Sciences University, South Africa.	Medical students' journey towards cultural humility: travelling with peers, teachers and patients through medical school and the health care system.
1140 - 1150hrs	Katangolo-Nakashwa N., Shingandji P., Namidi M., Mahoto S., Museta C.	University of Namibia. University of South Africa, South Africa.	Strengthening school health policy in Namibia: A mixed methods approach and proposed framework.
1200 - 1210hrs	Dikuwa M.J., Munangatire T.	University of Namibia.	Sustaining online learning beyond the pandemic in a health science education program at a university in Namibia: A phenomenography study.
1210 - 1220hrs	Louw H., van Niekerk L., Plastow N., WesselsQ.	University of Namibia. Stellenbosch University, South Africa.	Critical factors to consider in creating transformative learning experiences that promote occupational justice in health professions education: an integrative literature review.
1230 – 1240hrs	Amakali K., Njembo C.F.	University of Namibia.	Knowledge and Experiences of Nurses regarding the Preparation of Adolescents with Congenital Heart

		Ministry of Health & Social Services, Namibia.	Disease for Adulthood at Windhoek Central Hospital, Namibia.
1240 - 1250hrs	Niikondo H., Sakeus- J.	University of Namibia. Ministry of Health & Social Services, Namibia.	Knowledge, attitudes, and practice of diabetic patients regarding diabetic self-care management at Rundu intermediate hospital, Kavango east.
1250 - 1300hrs	Nghifikwa J., Lukolo L.N., Endjala T.	University of Namibia	Retrospective study of quality midwifery care during labour in maternity wards in Khomas Region, Namibia
1300 – 1310hrs	Mabuza L.H., Nashed K.K., Masiteng T., Adeniji A.A., Cook R., Burger H., Manning D.M.	Sefako Makgatho Health Sciences University, South Africa. University of Namibia.	The field of practice experiences of South African and Namibian medical practitioners who qualified outside and returned to practice in their own countries.
1310 – 1320hrs	Du Plessis A., van der Merwe C.	University of Namibia. Sefako Makgatho Health Sciences University, South Africa.	Surviving pandemic academia: The voice of women in post – graduate education.
<b>SESSION 3. INDIGENOUS KNOWLEDGE, NOVEL MOLECULES &amp; OTHERS</b>			
<a href="https://zoom.us/j/96330158837?pwd=TTZXY0c3QVRmRjVmdTQyOXFRVitSdz09">https://zoom.us/j/96330158837?pwd=TTZXY0c3QVRmRjVmdTQyOXFRVitSdz09</a>  Meeting ID: 963 3015 8837    Passcode: 606808			
1030 – 1040hrs	Uujava U	University of Namibia	The effect of dietary devil’s claw tubers by products (powders, pellets) on inflammation and wound healing in horses and dogs.
1040 – 1050hrs	Rupping V, Knott M	University of Namibia	Determination of the sun protection factor (SPF) of red ochre and various Namibian oils as well as the development of an SPF lip balm.
1050 – 1100hrs	Shatri A., Bouman D., Haiyambo D., Duplessis A., Ishola A., Wessels Q.	University of Namibia	Total quantification of bioactive compounds in sesamum capense aqueous mucilage: A step toward understanding its traditional use in treating gastric conditions.
1100-1110hrs	Jonas M.	University of Namibia	An Ethnographic Study of Identifying and Documenting the Ovahimba People’s Indigenous Health Knowledge and Practices in Namibia.

1110 - 1120hrs	Shigenge W., Mumbengegwi D., Bruwer I.	University of Namibia	Medicine in my language: the influence of language on traditional health care practices in San communities
1120 - 1130hrs	Malwa M., Lyaku J.R., Itenge T.O.	University of Namibia	An ethnobotanical Survey of Indigenous Knowledge on Medicinal Plants used to Treat Poultry Diseases in Sibbinda Constituency, Zambezi Region
1130 – 1140hrs	Kaurivi B.	University of Namibia	Cattle Identification Practices in Namibia: A potential Welfare Concern.
1140 - 1150hrs	Bwalya E.C.	University of Zambia	Application of Prolotherapy and PRP as an Alternative Option for Cranial Cruciate Ligament Rupture (CCLR) Treatment in dogs.
1200 - 1210hrs	Knott M	University of Namibia.	“San Ethnobotanical Exploration in Namibia” (SEEN) project update.
1210 – 1220hrs	Kaatura I., Kaurivi B., Bruwer F.	University of Namibia.	Prevalence and risk factors associated with bovine campylobacteriosis and trichomonosis in selected areas of Namibia.
<b>SESSION 4. NON – COMMUNICABLE DISEASES</b>			
<a href="https://zoom.us/j/94419694968?pwd=WDJHWU04cjdSbnNGcVFpb3hha1VZZz09">https://zoom.us/j/94419694968?pwd=WDJHWU04cjdSbnNGcVFpb3hha1VZZz09</a>  Meeting ID: 944 1969 4968 Passcode: 173788			
1030 – 1040hrs	Tshavuka F.I., Zou L.	University of Namibia.  Children Hospital of Chongqing Medical University, Chongqing, China.  Children’s Hospital of Shanghai Jiao Ton Medical School, Shanghai, China.	The role of mitochondrial VDAC2 in the survival and proliferation of T-cell acute lymphoblastic leukemia cells.
1040 – 1050hrs	Salomo S., Amukugo H.J., Shilunga A.P.K.	University of Namibia	Experiences of men diagnosed with prostate cancer on the supportive care from nurses in oncology departments.

1050 –1100hrs	Mano R.M., Kuona P., Misihairabgwi J.M.	University of Namibia.	Determination of birth prevalence of sickle cell disease using point of care test HemoTypeSCTM at Rundu hospital, Namibia.
1100 – 1110hrs	Meesher I., Chiwaridzo M., von der Heiden C.	University of Namibia.	Prevalence and risk factors of pelvic floor disorders in adolescent mothers in the Rundu district: A cross-sectional analytical study.
1110 - 1120hrs	Nashidengo R., Enssle C., Rukira K., Abebrese J., Zietsman A., Bussmann H., Schlemmer H.	Windhoek Central Hospital, Namibia. Windhoek Hospital Cancer Care Centre, Namibia. German Cancer Research Centre, Heidelberg, Germany.	Acceptability and feasibility of breast and prostate cancer screening of family members of an index case.
1120 – 1130hrs	Amakali K., Muleya L.N.	University of Namibia. Ministry of Health & Social Services, Namibia.	Risk factors associated with Primary Hypertension among military personnel at an army base: A cross sectional study.
1130 – 1140hrs	Yabe J., Mudimba D., Chitate F., Simataa J., Ndjoze V., Matomola O.C, Jacobs E..	University of Namibia.	Histopathological evaluation of canine cutaneous neoplasms in Windhoek, Namibia, 2021-2023.
1140 – 1150hrs	<u>Mufenda J., Leonhardt M., Brummer O., Mariwa F.K., Muller B., Bussman H.</u>	Ministry of Health & Social Services, Namibia. Gesundes Africa e.V., Berlin, Germany.	Feasibility of population-wide cervical cancer screening through HPV self-sampling campaign.

### SESSION 5: PHYSICAL & MENTAL HEALTH

<https://zoom.us/j/94171091498?pwd=Qm9FNkZkR2FwWTg2enp5ZFNBMIJIZz09>

Meeting ID: 941 7109 1498      Passcode: 898395

Time	Author list	Affiliations	Title of presentation
1030 – 1040hrs	Boer T, Janik M	University of Namibia	Hope, resilience, and stress among first year University of Namibia students.
1040 – 1050hrs	Munambah N.		Using indigenous games to develop a play-based intervention to promote

			physical activity among children in Namibia.
1050 – 1100hrs	Chimara M., van Bijon H., Adams F., van Niekerk L.	University of Namibia. Stellenbosch University, South Africa.	Perspectives of service providers on factors that should be considered for vocational rehabilitation of mental health service users in Namibia: a qualitative study.
1100 – 1110hrs	Chiwaridzo M., Shumba T.W., Kamba F. Von der Heiden C., Nashandi H., Van Der Merwe M., Okely T.	University of Namibia	Influence of gender and community setting on 24hr movement behaviour of children under the age of 5 years in Namibia: A cross-sectional pilot study.
1110 – 1120hrs	Stephanie G., Murangi A	University of Namibia	Does work-life balance matter for working mothers' engagement at work? A case of working mothers in Windhoek, Namibia.
1120 – 1130hrs	Katangolo H., Shifiona N., Katangolo-Nakashwa N.	University of Namibia	Unlocking the puzzle: Investigating factors associated with relapse among mentally ill patients at Intermediate Hospital Oshakati, Oshana Region, Namibia.
1130 – 1140hrs	Eiman A.F. & Namukwambia R.	University of Namibia	Experiences of Single elderlies living in Old Age Homes: Narrative Literature Review.
1140 – 1150hrs	Shumba T.	University of Namibia	Evaluating the impact of community-based rehabilitation intervention efforts for people with disabilities and their families in Khomas region, Namibia: a multi-phased, mixed methods study.
1150 – 1200hrs	Hatupopi S., Nuumbosho H., Amwaalanga M.	University of Namibia	Implementation of guidelines to manage perinatal depression in Windhoek, Namibia.
1200 – 1210hrs	Mwambene K.E., Yimer F., Oases J	University of Namibia	Prevalence of Depression, associated Factors and the Effect of Cognitive Behavioral Therapy Among patients with Diabetes Mellitus attending Diabetic Clinics in Namibia.
1210 – 1220hrs	Chiwaridzo M., Shumba T.W., Chimara M., van der Merwe M., Kamba F., Karera A., Madzvamutse C.R., Mojiminiyi F., Mudzi W.	University of Namibia University of Witwatersrand, South Africa.	Recurrent non-specific low back pain: Development of a physiotherapeutic intervention protocol and evaluation of its therapeutic effect on pain intensity, functional performance, psychological status, and health-related quality of life.
1220 – 1230hrs	Gentz A	University of Namibia	Violence exposure and mental health outcomes in children aged 13 -17: Findings from the 2019 Namibia VACs Survey.

1230 – 1240hrs	Hlatywayo C.K.	University of Namibia	Mental wellbeing in the workplace. Breaking down toxicity and legal implications thereof.
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## Day 2: 08<sup>th</sup> March 2024

ALL PRESENTERS FOR EOIs TO PRESENT PHYSICALLY

Venue: Osmund Mwandemele Auditorium (1LS0007)

<a href="https://zoom.us/j/98731391757?pwd=bUVrOHNLcVFmVDBaSEnrL1YzaWtUUT09">https://zoom.us/j/98731391757?pwd=bUVrOHNLcVFmVDBaSEnrL1YzaWtUUT09</a>			
Meeting ID: 987 3139 1757		Passcode: 483267	
Time	Presenter	Title of presentation	Type of presentation
0900 – 0915hrs	Prof Judith Hall. Executive Dean – Faculty of Health Sciences & Veterinary Medicine	Health and Research in UNAM: Future direction and definition of success.	
0915 – 0945hrs	Prof Indongo N.	Research in Namibia.	Keynote address
0945 – 1015hrs	Prof Mumbengegwi D.	Research ethics processes at UNAM.	Keynote address
1015 –1045hrs	Prof Chimbari M. PVC Great Zimbabwe University, Zimbabwe.	Enablers for enhancing Postgraduate throughput.	Keynote address
1045 - 1130hrs	Minister of Justice	Social justice in Namibia.	Keynote address
<b>Break</b>			
1200 – 1210hrs	Fasika Yimer.	<i>Confidential</i>	EOI
1210 – 1220hrs	Gabriel R., Nakweenda M., Shalonda S., Endjala T.	<i>Confidential</i>	EOI
1220 – 1230hrs	Nakatana K.T., Amukugo H.J., Salomo S.	<i>Confidential</i>	EOI
1230 – 1240hrs	Uujava U.	<i>Confidential</i>	EOI
1240 – 1250hrs	Shatri A.	<i>Confidential</i>	EOI
1250 – 1300hrs	Shatri A., Ishola A., Bouman D.	<i>Confidential</i>	EOI
<b>Lunch</b>			
1400 – 1410hrs	Mojiminiyi F., Ishola A., Keendjele T., Goswami N., Holzer S.	<i>Confidential</i>	EOI
1410 – 1420hrs	Nghitanwa E.M., Nashandi H.L., Tjiurutue I., Shigwedha O., Nuumbosho H., Amwaalanga M., Hatupopi S., Kazimbu A., Karera A.	<i>Confidential</i>	EOI
1420 – 1430hrs	Tshavuka F.I., Nepolo E.	<i>Confidential</i>	EOI
1430 – 1440hrs	Namene J., Nakambale H., Amkongo M.	<i>Confidential</i>	EOI



1440 – 1450hrs	Mabuza L.H., Nashed K.K., Masiteng T., Adeniji A.A., Cook R., Burger H., Manning D.M.	<i>Confidential</i>	EOI
	Hermann Bussmann	<i>Confidential</i>	EOI
1440 – 1450hrs	Namene J., Nakambale H., Amkongo M.	<i>Confidential</i>	EOI
1450 – 1500hrs	Fernandes A., Marshal J., Hlatywayo, C.	<i>Confidential</i>	EOI
1500 – 1510hrs	Shumba T	<i>Confidential</i>	EOI
1510 – 1520hrs	Shumba T	<i>Confidential</i>	EOI
1520 – 1530hrs	Chiwome B.	<i>Confidential</i>	EOI
1530 – 1540hrs	Low H., Kamba F., Drotsky L., von der Heiden C., Munambah N.	<i>Confidential</i>	EOI

## **AFRICA HEALTH INTERNATIONAL CONFERENCE (AHIC - 2024)**

### ***Advancing Health Equity: Bridging the Gaps through Innovation and Advocacy***

Globally, Higher Education Institutes, Universities, have three core missions: a. Education & Training, b. Outreach & Civic Mission (Outreach, Engagement and Development) and of course, c. Research.

Sophisticated, well-developed Universities take research very seriously. They take it very seriously because the right research, carried out *well* and in a timely and responsive manner, really does shape, and save lives. Think of COVID-19, it is the easiest example.

The Faculty of Health Sciences and Veterinary Medicine (FHSVM) at the University of Namibia (UNAM) is such an organisation. Every member of staff is required to carry out a certain amount of research as part of their contract. Of course, some staff are more interested in the other two missions, but all will still do some research. We, as an organisation, push the boundaries of current knowledge, some staff leading, some being part of research teams, but all of us in this together.

As our faculty team brought this pamphlet of abstracts together, it seemed clear that our staff are successful. The breadth of topics, focused on our themes, is very impressive. Staff are carrying out research, which is of interest to them, but more than that they are carrying out research of relevance to their people, the citizens of Namibia.

What do we research? Our research applies to both animals and human beings and thus the environment matters too. We are a ONE Health Research Faculty; you can clearly see that as you leaf through the pages of abstracts. Our research is relevant to Namibia, to the sub-region and to Africa. Thus, here is the 1st Health Africa International Conference of March 2024.

If our work may not have the highest impact factors of other Continents, does that matter? Well in the long run, it does. It matters because Africa has a vast population in need of relevant, meaningful, research improving health and saving lives. The way we 'count' African Research may well be wrong, unfair even, as we compete against standards set by other societies. Rather, we should count impact for Africa, as Africans, and here in FHSVM we look exactly for that: IMPACT. Fundamentally, you will find impactful relevant research in this pamphlet. Well, done to our researchers!

On a personal note, I spent many hours reading every single abstract. The whole exercise was very interesting. I am pleased about, and proud of, what I find. Every page and thus every abstract can be referenced online via our website. There will be

a link, and you must use your page number to reference your abstract. We wish to raise our visibility in the future. This is our first step.

In summary, this pamphlet contains research by Africans for Africans. I wonder what our conference of 2025 will showcase. Hopefully, more and better. Here's to the future we all crave:

**Good health and well-being for all Africans achieved through robust research practice.**

Special thanks to Prof Chitanga, Dr Shatri and Mr Tshavuka. They made this happen.

Professor Judith Hall  
Executive Dean Faculty of Health Sciences and Veterinary Medicine  
Campus Director, Hage Geingob Campus  
University of Namibia.

## **KEYNOTE PRESENTATIONS 1**



### **.i Enablers for enhancing postgraduate throughput**

**Prof MJ Chimbari**, Great Zimbabwe University

#### **Abstract**

Most postgraduate students, particularly those commencing studying for Master or PhD by research, have limited skills in research methods. Although there are both handbooks on regulations and induction sessions held during registration, many students often do not understand these regulations and what their rights are particularly in their interactions with academic supervisors.

As postgraduate students progress on their study journey, they face challenges related to writing and publishing their work. This is a major challenge as all universities, almost universally, require postgraduate students to publish at least one paper in a peer reviewed journal before they can graduate.

The aim of this paper was to provoke discussion on enhancement of enablers for postgraduate throughput. The paper is based on experiences of the author in research leadership in 4 universities in 3 countries (Zimbabwe, Botswana and South Africa) and consultations made with postgraduate students at University of KwaZulu-Natal to identify enablers for postgraduate throughput.

Consultations were made with students through workshops and online surveys to determine what postgraduate students perceived to be barriers and enablers to progression of their studies. During the workshops students worked in groups and presented a summary of their discussions at plenary. Academic supervisors and academic leaders at UKZN were engaged to identify what they considered to be good support for postgraduate students.

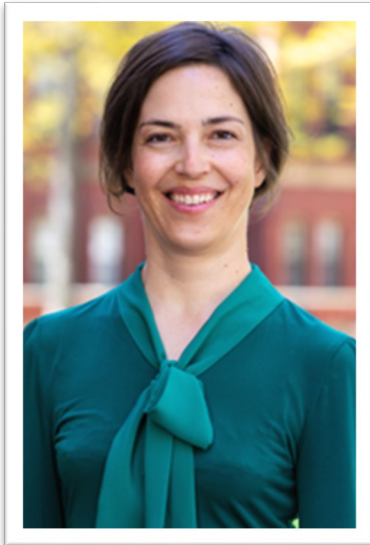
Based on the students' workshops, and consultations made with academic leaders and supervisors, four modules considered to be critical for smooth progression of postgraduate students were identified and developed. The modules were on; i) academic supervision – student and academic perspectives, ii) identifying appropriate research topic and preparing a research proposal, iii) data collection, iv) manuscripts writing and publication, and vi) preparing a thesis.

The paper discusses how the modules were operationalised and how success was assessed. The paper concludes that the enablers identified were able enhance postgraduate throughput based on indicators that included reduced period taken to develop acceptable proposal, reduction in student-supervisor conflicts, reduced co-supervision challenges, increased number of publications by students during their study period and improved quality of thesis.

**Keywords:** Postgraduate, Barriers, Enablers, Supervision

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## **KEYNOTE PRESENTATIONS 2**



**Mareli Claasens**

**.ii Collision of three global pandemics: the effect of tuberculosis and HIV on the epidemiological, clinical, virological, and immunological trajectory of COVID-19 in Botswana and Namibia at primary healthcare facilities**

**Stefan Niemann<sup>1</sup>, Mareli Claasens<sup>2</sup>, Chawangwa Modongo<sup>3</sup>, Tadesse Kassaye<sup>4</sup>, Gunar Gunther<sup>5</sup>, Emmanuel Nepolo<sup>2</sup>, Balladiah Kizito<sup>6</sup>, Pieter Steenkamp<sup>7</sup>**

<sup>1</sup>Research Center Borstel, Germany, <sup>2</sup>University of Namibia, Windhoek, Namibia, <sup>3</sup>Victus Global Botswana Organization, Gaborone, Botswana, <sup>4</sup>Health Poverty Action, London, United Kingdom, <sup>5</sup>Inselspital Bern, Switzerland, <sup>6</sup>Victus Global Botswana Organization, Gaborone, Botswana, <sup>7</sup>Health Poverty Action, Namibia

### **Abstract**

Covid-19 emerged as global pandemic over past three years (starting in December 2019) and had an unprecedented impact on public health. SARS-CoV-2 epidemiology was poorly understood, especially in the African context. A particular gap in knowledge was the effect of HIV and tuberculosis (TB) on the outcomes of Covid-19 disease.

We implemented a research study that addressed critical questions concerning Covid-19 disease epidemiology in the context of low resource countries with high burden of poverty, and high rates of TB and HIV.

Recruitment commenced in July 2022 and followed a two-pronged approach, first, all primary healthcare facility (PHC) attendees were tested for TB infection, TB disease, Covid-19 and HIV and second, we followed-up Covid-19 patients as diagnosed by the Ministries of Health, and tested these index cases and their households for TB infection, TB disease, Covid-19 and HIV.

Preliminary results for the PHC attendees show (i) the high TB infection rate in Namibia (72%, 95%UI 67-76) vs. Botswana (44%, 95%UI 41-47,  $p < 0.001$ ), (ii) the high TB disease rate in Namibia (3.8%, 95UI 2.4-5.9) vs. Botswana (1.6%, 95UI 0.8-2.8,  $p = 0.01$ ), and (iii) the proportion of the total number of participants who had TB and SARS-CoV-2 co-infection (155/1500, 10.3%).

Future analyses will include investigating risk factors associated with these differential rates. We believe our findings will contribute to the growing literature on enhanced case finding at PHC through universal TB screening, and to an understanding of the interaction between Covid-19, TB, and HIV.

**Keywords:** TB, Immunological trajectory, COVID-19

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## **RESEARCH THEME 1: INFECTION, INFLAMMATION & IMMUNOLOGY**

### **i. From Africa to Namibia: Antimicrobial resistance trends of human clinical *Escherichia coli* and *Staphylococcus aureus*.**

**Haindongo E.H.H.<sup>1,2\*</sup>, Ndakolo D.<sup>1,4</sup>, Hedimbi M.<sup>1,5</sup>, Hakanen A.<sup>2</sup> & Vuopi J.<sup>2</sup>**

<sup>1</sup> University of Namibia, Windhoek, Namibia, <sup>2</sup> University of Turku, Turku, Finland, <sup>3</sup>Turku University Hospital, Finland, <sup>4</sup> Ministry of Health and Social Services, Namibia, <sup>5</sup> International University of Management, Namibia

#### **Abstract**

Sub-Saharan Africa faces a significant burden of communicable diseases, particularly those caused by bacteria resistant to antimicrobials. This poses a serious threat to effective infection management. Urinary tract infections are also common in the region, with women disproportionately affected. Limited surveillance systems and laboratory capacity hinder the collection and analysis of antimicrobial resistance data in Africa, including Namibia.

This study aimed to gain insights into the antimicrobial susceptibility patterns of clinical isolates of *Escherichia coli* and *Staphylococcus aureus* in Africa and Namibia. A systematic review of the World Health Organization Africa (WHO Afro) region literature was conducted, followed by a retrospective analysis of national urinary and bloodstream antimicrobial susceptibility testing (AST) data. Additionally, a prospective AST evaluation of bacteraemic isolates was performed using Kirby-Bauer disk diffusion. EUCAST and WHONET 2019 Expert Interpretation rules were applied.

The study findings revealed concerning levels of methicillin-resistant (12% and 34% for cloxacillin and oxacillin, respectively) and Extended Spectrum Beta Lactamase (ESBL) producing pathogens (42%) across Africa. In Namibia, ESBL *E. coli* prevalence among uropathogens isolated from females was 22% in 2016/7. However, nitrofurantoin demonstrated efficacy in this setting. Bacteraemic ESBL *E. Coli* prevalence has generally increased over a 10-year period (2011: 24.2% to 2019:32.7%), while Methicillin Resistant *Staphylococcus aureus* (MRSA) prevalence has decreased (47.2% to 18.8%). Prospective blood culture isolate analysis generally aligned with the retrospective findings, indicating moderate-to-high ESBL and multidrug-resistant (MDR) prevalence, and a low prevalence of MRSA.

The study highlights the alarming levels of antimicrobial resistance in Africa, particularly for ESBL-producing pathogens. This poses a significant challenge to managing infections

effectively. Enhanced surveillance systems and strengthened laboratory capacity are crucial to monitor and combat antimicrobial resistance in the region.

**Keywords:** Antimicrobial resistance (AMR), Extended Spectrum Beta-Lactamase (ESBL), Methicillin Resistance Staphylococcus aureus (MRSA), *E. coli*, *S. aureus*

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## ii. Effectiveness of defaulter tracing system for TB lost to follow-up patients: Narrative Literature Review.

**Fleermuys J.L.<sup>1</sup>, & Namukwambi R.<sup>1\*</sup>**

<sup>1</sup> University of Namibia, Southern Campus, Namibia

### Abstract

Tuberculosis is a contagious bacterial infection that largely affects the lungs. Tuberculosis is curable if patients receive effective long term anti-tuberculosis treatment. Adherence to anti-tuberculosis treatment is crucial for patients' cure, preventing infection spread and development of medical resistance.

This study of adherence to treatment employment narrative literature review. Literature reviewed included studies on qualitative, quantitative and reports on defaulter tracing. Computer search on data bases such as PubMed, Global Health, Google Scholar, Wiley, Scopus and technical health agencies websites were utilizing to obtain peer-review journals articles and reports on effectiveness of defaulter tracing for TB lost to follow- up. Data were analyzed using content analysis.

The study revealed that

- a. there are various defaulter tracing systems where all TB patients' information can be accessed, these indicate when patients had commenced treatment, which regimen they are taking and the duration of treatment.
- b. This enables health workers to monitor patients on TB treatment and identify those who missed follow-up dates and trace them in time to prevent lost to follow-up.
- c. However, the study findings also indicated that the majority of developing countries do not have a viable defaulter tracing system due to limited resources.
- d. In addition, the poor socio-economic- situations of patients contribute to defaulting on TB treatment. Thus, leading to ineffective defaulter tracing system for TB lost to follow-up patients.

Hence, the study recommends that improvement in socio-economic elements of the patients and their families along with more financial aid might well enhance treatment supervision mechanisms and thus treatment *per se*.

**Keywords:** Defaulter tracing System, effectiveness, lost to follow up, Tuberculosis

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### **iii. Knowledge, attitudes, practices, and risk perception of cattle farmers in Namibia to antibiotics use and resistance.**

**Haimbodi R.<sup>1</sup>, Chidumayo N.N.<sup>2</sup>, Sitali D.C.<sup>3</sup>, M'kandawire E.<sup>2\*</sup>**

<sup>1</sup> Ministry of Agriculture, Water and Land Reform, Directorate of Veterinary Services, Namibia,

<sup>2</sup> University of Zambia, School of Veterinary Medicine, Zambia, <sup>3</sup> University of Zambia, School of Public Health, Zambia

#### **Abstract**

The misuse of antibiotics in livestock contributes to the emergence of antibiotic-resistant bacteria. The development of antibiotic resistance in bacteria of animal origin is of public health concern since drug resistant pathogens in animals can spread to humans. Several countries have therefore introduced regulations to restrict the use of antibiotics in livestock. Namibia was the first African country to ban the use of antibiotics as growth promoters and restrict the use of antibiotics to the treatment of bacterial diseases with a prescription from a veterinarian. However, there are limited studies on antibiotic stewardship among farmers in the country.

The aim of this study was to determine the antibiotic awareness and usage of cattle farmers in Oshikoto region, Namibia.

A questionnaire on antibiotic knowledge, attitudes and practices (KAP) was administered to 274 randomly selected cattle farmers in Namibia. To calculate the KAP scores, one mark was awarded for each correct answer and zero was awarded for incorrect or unsure responses. Respondents having  $\geq 50\%$  correct answers were considered as having good KAP scores.

The KAP score recorded ranged from 8 % to 76 %. Forty-three per cent of the respondents had good KAP scores. Good KAP was not associated with constituency sex, age or education status. Semi-commercial and commercial farmers had significantly better knowledge than post and homestead farmers.

The findings of this study indicate that there is a need to improve antibiotic usage and antibiotic resistance education programmes to promote rational antibiotic usage.

**Keywords:** Cattle farmers, knowledge, attitudes, practices, antibiotics.

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#### iv. Changing epidemiology and susceptibilities for bacterial meningitis in Namibia.

Simeon P.<sup>1</sup>, Henok L.<sup>1</sup>, Ms. Rachel Mulenga R.<sup>1</sup> & Jonkman L.<sup>1\*</sup>

<sup>1</sup> University of Namibia

##### Abstract

Bacterial meningitis carries significant morbidity and mortality. Empiric antibiotic regimens should be informed by local epidemiology and resistance data. Current empiric therapy in Namibia for adults includes ceftriaxone monotherapy, despite international guidance to add vancomycin if *S. pneumoniae* resistance is greater than 1%. The latest published epidemiology and resistance data in Namibia was published in 2013 and identified a *S. pneumoniae* resistance rate of 2.2%.

The purpose of this study was to assess current epidemiology and susceptibility in order to inform guidelines.

This is a retrospective analysis of laboratory results reported by the Namibia Institute of Pathology (NIP) database. All cerebrospinal fluid (CSF) samples with bacterial isolates collected between 1 July 2018 and 30 June 2023 across Namibia were included. Data was cleaned to remove non-bacterial samples and non-CSF isolation. To create antibiogram, susceptibility was calculated as the percentage of isolates sensitive to each antibiotic (number susceptible/number tested x 100%). 648 bacterial isolates from CSF were included.

The results show that almost a third of samples were from children under 1 (n=201, 31%). More than half of samples were from Intermediate Hospital Katutura (n=363, 56%). The most common pathogens isolated were coagulase-negative staphylococcus (n=204, 31.5%), followed by *S. pneumoniae* (n=117, 25.7%). Most pathogens had fewer than 30 isolates making assessments of susceptibilities limited. The Ceftriaxone resistance rate in this sample was 1%. Minimum inhibitory concentrations (MICs) for *S. pneumoniae* were not reported so resistance rates to ceftriaxone may be higher than in this analysis.

The high levels of coagulase-negative staphylococcus are concerning contamination of CSF samples. The low number of samples from most hospitals in the country may suggest limited CSF testing in meningitis and this, if rectified, could provide an opportunity for improvement.

**Keywords:** meningitis, antimicrobial resistance, antibiogram

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## **RESEARCH THEME 2: HEALTH EDUCATION**

### **v. A Scoping Review of Nurse-Led Medical-Surgical Knowledge Translation Interventions to improve in-Hospital clinical practice in WHO Afro-region.**

**Haifete A.H.<sup>1,2\*</sup>, Chironda G.<sup>1</sup> & Brysiewicz P.<sup>1</sup>**

<sup>1</sup> University of Namibia, <sup>2</sup> University of KwaZulu-Natal, South Africa.

#### **Abstract**

The process of putting research outputs into action and thereby ensuring its dissemination is very important in healthcare. Although nurse-led knowledge translation interventions have become an important focus in the high-income countries, the extent of nurse-led knowledge translation interventions in World Health Organization (WHO) Afro-region is not well established.

We conducted a review aimed to map the evidence of nurse-led knowledge translation interventions in WHO Afro-regions using the Joanna Briggs Institute (JBI) Scoping Review methodology. The review protocol was registered with Open Science Framework (<https://osf.io/>).

A systematic electronic search of articles was carried out in selected electronic databases and using various search engines. All eligible identified articles (688 articles) were imported into the Systematic reviews Web App (Beta) Rayyan. The selection process included title and abstract screening and full text articles. A Prisma flow diagram detailing the procedure was developed. The review process identified 21 articles.

Results showed there to be very few publications between 2013 to 2019 with a sudden increase in 2020 (n=5) and 2021 (n=4). Among the 3 regions studied in the WHO Afro-region: the Eastern region contributed 48% of the studies, followed by Western region with 43%. Out of the ten countries that were involved, Nigeria contributed 33%, followed by Uganda with 19%. Eight of the studies focused on nurses' education, while four examined patient education interventions. Ten studies (n=10) had nurses as recipients of the intervention, while seven studies (n=7) had patients as recipients of intervention. Most of the outcomes focused on increasing knowledge, with the least focused on changing behaviors.

The review concluded that interventions should be appraised for their ability to promote evidence-based knowledge, skills and behavior in both rural and urban clinical settings. More nurse-led knowledge translation interventions need to be conducted in WHO-Afro regions. Other types of interventions are needed, rather than just those focused on educating nurses. Research insights in terms of implementation outcomes such as behaviours are clearly needed. More focused systematic reviews should be conducted to identify the best available research in specific areas. Systematic review can assist by create advice according to clinical setting, type of intervention, and outcomes.

**Keyword:** Medical-surgical, nurse-led, knowledge translation interventions, in-hospital, clinical practice, WHO Afro-region

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## vi. Stakeholder Dynamics and Policy Implementation: A Comprehensive Analysis of School Health Policies in Namibia.

Katangolo-Nakashwa N.<sup>1,2\*</sup>, Mfidi F.N.<sup>1</sup> & Thupayagale-Tshweneagae G.<sup>2</sup>

<sup>1</sup> University of Namibia, <sup>2</sup> University of South Africa

### Abstract

School health policies in Namibia aim to promote learner well-being but face challenges in formulation, coordination, resourcing, accessibility, and consistency. This prevents the full actualisation of their benefits.

Comprehensive surveys and focus groups were conducted with various stakeholders (n=40), including policymakers, district officials, principals, and teachers to assess perspectives. Qualitative thematic analysis identified key issues and recommendations.

Major themes highlighted obstacles around decentralized governance limiting cohesive vision; inadequate budget allocation; lack of accountability procedures; shortage of facilities and staff in remote areas; and variances in health education standards across schools.

Proposed solutions emphasised national frameworks; capacity-building; public-private partnerships; community engagement; monitoring and reporting systems. A range of practical steps are needed, predicated on robust collaboration between multiple stakeholders, to enhance Namibian school health policies and ensure access, resources, and continuity of quality health education nationwide.

**Keywords:** school health policy, education policy, health promotion, stakeholders, Monitoring and Evaluation

**Corresponding author:** Katangolo-Nakashwa N., email: [nkatangolo-nakashwa@unam.na](mailto:nkatangolo-nakashwa@unam.na)

## **vii. Development of a smoking cessation counselling algorithm for health care workers in Zambezi region, Namibia.**

**Mahoto S.<sup>1\*</sup>, Katangolo-Nakashwa N.<sup>2</sup> & Newaka E.<sup>1</sup>**

<sup>1</sup> University of Namibia <sup>2</sup> University of South Africa

### **Abstract**

Smoking cessation is a significant public health challenge in many lower and middle-income countries, including Namibia.

This study aimed to develop and present a culturally targeted, evidence-based algorithm for healthcare professionals to help patients quit smoking. This was carried out with a view to developing a training guide for healthcare professionals on how to implement smoking cessation in the healthcare setting. The study used the transtheoretical model, the theory of planned behaviour, and the theory of reasoned action to identify the stages of pre-contemplation, contemplation, preparation, action, and maintenance as being fundamental for smoking cessation.

The study found the following, that:

- a. smoking cessation delivery by healthcare workers in the Zambezi region of Namibia was inadequate.
- b. individual decision-making about quitting smoking could be influenced by different stages.
- c. there is a need to improve healthcare workers' skills and knowledge in providing smoking cessation intervention.
- d. it is important to ensure that smoking cessation interventions are affordable and accessible.

Study findings led to the development of a culturally appropriate and evidence-based step-by-step guide/algorithm for healthcare providers and a smoking cessation leaflet for the public. Additionally, a training guide to implement smoking cessation in the healthcare setting was developed for healthcare professionals. The study suggested that best practice tools, modified to the specific needs of the target group and environment, can be effectively transferred to the Namibian context.

In conclusion, these findings provide valuable insights for improving smoking cessation interventions in Namibia. The tools that were developed can be used to improve the delivery of smoking cessation services in healthcare settings in Namibia.

**Keywords:** Health Care Providers, Tobacco Smoking, attitudes, behaviours, health risks, Katima Mulilo.

**Corresponding author:** Mahoto S., email: [smahoto@unam.na](mailto:smahoto@unam.na)

## viii. Knowledge and Adherence to radiation protection among non-radiation Health Care Workers (HCWs) at two operating theaters in Windhoek, Namibia.

Shivute P.<sup>1</sup> & Shilumba M.<sup>1\*</sup>

<sup>1</sup> University of Namibia

### Abstract

Diagnostic radiography is used to capture images during patient operations in surgical settings. Ensuring the protection of non-radiation Health Care Workers (HCW), such as nurses and doctors, from radiation resulting from theatre radiography is crucial.

This study aimed to examine the levels of knowledge and adherence to radiation protection among HCWs in the operating theaters of Windhoek Central Hospital and Intermediate Hospital Katutura.

A quantitative descriptive research method was employed to assess this. Data collection involved closed-ended questionnaires, and participants were selected through a simple random sampling method. Data were analyzed using SPSS version 26.

Fifty-eight non-radiation HCWs participated. Most (77.6%) were female with nurses comprising the largest demographic (62.1%). A majority of participants (53.4%) lacked prior education in radiation protection. Concerningly, 70.7% did not use dosimeters during theater radiography, which is a requirement for radiation protection. Consequently, there was no way to monitor how much radiation they were being exposed to. No significant association was found between participants' allocated hospital and the level of knowledge, but a significant association ( $p=0.027$ ) was found between participants' allocated hospital and adherence levels.

The present findings suggest that there is inadequate knowledge and adherence to radiation protection among participating HCWs. Consequently, education on radiation protection must be mandated, with measures should be taken to enforce adherence.

**Keywords:** Radiation protection, Non-radiation Health Care Workers, Operating theatres, Adherence

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## ix. Strengthening school health policy in Namibia: A mixed methods approach and proposed framework

**Katangolo-Nakashwa N.<sup>2\*</sup>; Shingandji P.<sup>2</sup>, Namidi M.<sup>2</sup>, Mahoto S.<sup>2</sup> & Museta C.<sup>2</sup>**

<sup>1</sup> University of South Africa <sup>2</sup> University of Namibia

### Abstract

Effective school health policies are crucial for fostering learner well-being and a conducive learning environment. However, in Namibia, specific challenges hinder optimal policy implementation. These policies aim to create a health-promoting environment, not only physically but also a school's social environment. As a result, this should ensure a well-functioning psychological environment that is inclusive for all students and staff members.

This study aimed to develop a robust conceptual framework for school health policy in Namibia, addressing these challenges and promoting learner well-being.

A mixed-methods approach was employed, encompassing: (1) a comprehensive literature review of school health policies and related challenges in Namibia; (2) semi-structured interviews with key stakeholders like policymakers, educators, and learners; and (3) an analysis of existing school health policies and their implementation strategies.

This research identified critical challenges within current school health policies, including a shortage of trained healthcare personnel, insufficient health education materials, underdeveloped information systems, and a lack of formal connections between schools, health services, and stakeholders. Learners' perspectives highlighted the disconnect as a potential contributor to pregnancy-related school dropout. Additionally, analysis of educational policies revealed the need to address broader determinants of health within the school environment, encompassing physical, mental, and social aspects.

Based on the findings, a comprehensive and interconnected framework for school health policy in Namibia is proposed. Key components include: (1) addressing learner health needs through accessible healthcare services and tailored education; (2) promoting healthy environments by focusing on hygiene, nutrition, and physical activity; (3) strengthening health education through curriculum integration and addressing key health topics; (4) building capacity by equipping teachers and staff with necessary training; (5) engaging stakeholders through collaborative partnerships; and (6) implementing rigorous monitoring and evaluation to track progress and adapt strategies as needed. This study's findings and proposed framework offer valuable insights for policymakers, educators, and stakeholders in Namibia. By adopting and implementing this framework, stakeholders can create, refine, and assess school health policies that effectively address specific challenges and holistically prioritise learner well-being, creating a foundation for healthier and more resilient future generations.

**Keywords:** School health policy, Namibia, conceptual framework, learner well-being, mixed-methods research.

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**x. Medical students' journey towards cultural humility: travelling with peers, teachers and patients through medical school and the health care system.**

**Botha G.<sup>1</sup>**

<sup>1</sup>Sefako Makgatho Health Sciences University

**Abstract**

Cultural humility (CH) is recognised as a vital journey for addressing diversity and power imbalances, but its application remains elusive. While existing literature covers CH's *why* and *what*, the holistic development of its component parts (i.e. supportive interactions, self-awareness and –critique, openness and ego-lessness) during medical training is underexplored. Given the foundational role of interactions in CH, this study contributes to further informing the *how* of CH by investigating the dynamic development of CH during interactions with peers, teachers, patients in settings marked by inherent power imbalance.

An interpretivist qualitative approach was employed, involving purposive sampling of diverse undergraduate medical students from one medical school. Data collection was through semi-structured interviews, analysed using thematic analysis. Ethical clearance and participant consent was obtained. Interactions between actors unfolded in multiple dimensions and layers, often described as a transformative journey. Findings were classified into four categories, i.e. journeying from feeling like an outsider to embracing interactions, from absolute truth to questioning perceptions, journeying within power imbalance and to future roles through advocacy and introspection.

In illuminating the 'how' of developing CH our results emphasised a multifaceted, individual process significantly influenced by interactions with peers, teachers, patients, the healthcare system, and researchers, both formally and informally. During this journey, CH component parts progress in multi-directional and layered ways. Findings are explored using potential explanatory frameworks of intergroup contact and power relations, which underscore overlooked potential for addressing concerns through essential dialogue.

**Keywords:** Cultural humility, medical training,

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## **xi. Surviving pandemic academia: The voice of women in postgraduate studies**

**Du Plessis A.<sup>1\*</sup> & Sutherland C.<sup>2</sup>**

<sup>1</sup> University of Namibia, <sup>2</sup> Sefako Makgatho University

### **Abstract**

This paper explores the challenges, risks and impact on personal and professional development for women registered for postgraduate degrees, during the coronavirus pandemic from 2020 to 2022. We also provide an overview of the coping mechanisms employed by women, and the strategies implemented by employers to mitigate the additional inequalities brought on by the pandemic. In addition, we describe our stepwise, transferable method for conducting future scoping reviews using AI tools. The research followed the checklist provided by the PRISMA extension for Scoping Reviews (PRISMA-ScR) to ensure appropriate rigor and research quality.

Out of the 77 initially screened and downloaded articles, 53 were selected for inclusion in the review. Articles were summarized and categorized in MS Excel. ChatGpt 3.5 were then employed to extract relevant data from summaries. Bard (now Genesis) Google's language model was employed to analyse themes in the data. Common themes were extracted from the literature and reported deductively.

The results show that the coronavirus pandemic reasserted the unequal division of labour between men and women in the household, in many cases women were forced to abandon their work, their businesses or their degree programs. For those women who remained working and studying from home, it was impossible to set appropriate boundaries between home and work life. With the closing of schools, the responsibility of care fell disproportionately on women. Academic productivity by women dwindled, while the opposite was true for men.

The temporal effects of the inequalities brought on by the coronavirus pandemic maybe long term, but this remains to be investigated. Strategies to improve the imbalance in roles that were identified could involve embracing technologies that enable virtual work, normalising flexible work schedules, increasing family leave for mothers and partners and providing quality and affordable childcare.

**Keywords:** Academic, women, postgraduate study, AI tools

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## xii. Sustaining online learning beyond the pandemic in a health science education program at a university in Namibia: A phenomenography study.

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### Abstract

The Covid-19 was a catalyst for the adoption of online tools in higher education, including health sciences programs. Prior to Covid-19, online learning was not considered as a core way of facilitating learning in full time programs. While the pandemic demonstrated that it was possible to deliver practical programs such as nursing online, it is not known if online learning will become an integral part of health sciences education beyond the pandemic.

The objective of this study was to identify and describe strategies to sustain online learning beyond the pandemic in health sciences education in one university in Namibia.

A phonomyography design was employed, three educators and ten students, purposively sampled (maximum variation), participated in the study. Data were collected through in-depth interviews using semi-structured interview guide with each interview lasting about 30 minutes. Data were analysed thematically guided by the phonomyography framework of analysis.

Findings revealed an outcome space showing positive and negative experiences of online learning and how these experiences shaped perceptions and the practice of online learning during and after the Covid -19 pandemic. Sustaining online learning beyond the pandemic required individual willingness, and this willingness needed to be supported by resources, policies and guidelines in direct practice. Training support is needed to avoid experiential learning in use of technology which diverts effort from actual learning of the subject matter.

This suggests that a framework of implementation should be designed which will enable monitoring and evaluation of online learning and provide and an opportunity for improving practice. It is possible that the use of online learning may reduce post pandemic if there are no deliberate measures to adopt online learning and implement measures enabling educators and students to consider online learning a choice rather than a must do.

**Key Words:** online. learning, sustainability, phenomenography, pandemic

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## **RESEARCH THEME 3: INDIGENOUS KNOWLEDGE & NOVEL MOLECULES**

**xiii. Determination of the sun protection factor (SPF) of red ochre and various Namibian oils as well as the development of an SPF lip balm.**

**Rupping V.<sup>1</sup> & Knott M.<sup>1\*</sup>**

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### **Abstract**

The Ovahimba tribes make use of 'Otjize', a mixture of finely ground red ochre, mixed with butter and fat, to protect their skin and hair from the harmful rays of the sun.

This research project aimed to assess the photoprotective properties and SPF factors of Namibian red ochre at different concentrations and in different bases (w/w%), as well as to assess the SPF of unique Namibian oils by UV spectrophotometry. Using the results obtained, a novel lip balm was formulated to deliver the highest possible SPF. The absorbance values of both the red ochre samples and the Namibian oils were recorded and used in the spectrophotometric method of Mansur whereby the absorbance values were substituted into the Mansur equation to calculate the SPF of each sample.

The results of the experiment showed that the SPF of the zinc ointment base was 24 and petroleum jelly was 0.61. The sample with 5% red ochre in petroleum jelly had an SPF of 1.6 followed by an SPF of 3.4, 12.7 and 13.15 for the 10%, 20% and 50% samples respectively. The results of the Namibian oils examined determined that Ximenia has the highest SPF of 11.5. Marula had an SPF of 0.45, Kalahari Melon 2.9 and Baobab 2.74. A 20% red ochre and 20% Ximenia oil in petroleum jelly delivered an SPF of 14.7.

The study concluded that the best SPF lip balm formulation would consist of 20% red ochre and 20% Ximenia oil in a zinc ointment base.

**Keywords:** SPF, red ochre, Ximenia oil

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#### xiv. Total quantification of bioactive compounds in *Sesamum capense* aqueous mucilage: A step toward understanding its traditional use in treating gastric conditions.

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##### **Abstract**

Over 80% of the world's population relies on the use of medicinal plants as alternative treatments for a wide variety of human diseases. *Sesamum capense* mucilage is used by traditional health practitioners in Northern Namibia to treat acid refluxes and gastric wounds. However, the bioactive compounds present in the mucilage are not quantified. Studies have linked bioactive compounds to the relaxing and soothing effect and antibacterial properties of mucilaginous plants.

This study aimed to quantify the bioactive compounds linked to the gastroprotective properties of medicinal plants. Total flavonoid content was determined using the aluminium chloride colorimetric method. Total phenol content was determined using the Folin–Ciocalteu method. Total alkaloid detection was done using acetic acid in ethanol. Tannin content was determined using the Follin-Denis reagent. Total saponin was determined using petroleum ether. The Bromohymol method was used to quantify Oses and Holosides. Total glycoside was determined using glacial acetic acid. Total Anthraquinone was detected using benzene in sulfuric acid. Antioxidant activity of the ethyl acetate and aqueous extracts was measured based on biochemical methods.

*S. capense* mucilage contained a wide range of bioactive compounds with lower flavonoid contents of  $0.21 \pm 0.02$  and higher Alkaloid content of  $0.6 \pm 0.02$ . Glycoside contents of  $7.9 \pm 0.02$  were recorded, with oses and holosides of  $0.02 \pm 0.01$ . The percentage of antioxidant activities recorded was  $80.53 \pm 0.114$ . These findings revealed that *S. capense* is rich in compounds with gastro-protective properties.

**Keywords:** Bioactive compounds; Mucilage; Gastro-protective; Antioxidants.

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## xv. An Ethnographic Study of Identifying and Documenting the Ovahimba People's Indigenous Health Knowledge and Practices in Namibia

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<sup>1</sup>University of Namibia, Namibia

### Abstract

An anthropological study undertaken among the Ovahimba people of Namibia's Kunene region to investigate their current Indigenous Health Knowledge (IHK).

A qualitative approach with an ethnographic design was used. Twelve participants who were regarded as Indigenous Health Knowledge experts by the Ovahimba people participated in the study.

The Ovahimba were discovered to have extensive knowledge and skills in recognising and diagnosing the physical symptoms of 17 diseases and maladies prevalent in their communities. They were also found to have a broad and in-depth knowledge of approximately 45 indigenous plants and five (5) animal parts utilised as medicines in curing and easing symptoms of the 17 most frequent diseases and ailments they encounter. The Ovahimba also have several procedures for mixing, measuring, and creating potions for therapeutic purposes.

These findings suggest the need to conduct a formal evaluation in the form of a study to determine the efficiency of traditional treatments in treating common diseases. Additionally, educational programs be constructed to incorporate what is known and practiced by the Ovahimba experts, in order to encourage learning among community members, benefit future generations, and enhance health outcomes. For this to happen and be sustained, substantial institutional support systems in the form of partnerships between the government and Indigenous Health Knowledge practitioners are required.

**Keywords:** Diseases, Education, Programmes, Health Knowledge, Indigenous, Remedies

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## **xvi. Medicine in my language: the influence of Language on traditional Healthcare practices in San communities in the Omusati Region**

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<sup>1</sup> University of Namibia, Namibia

### **Abstract**

It is estimated that there are *circa* 30,000 San people are living in Namibia, and contrary to popular belief, only a small proportion of San live in the area formerly known as “Bushmanland”, which is today the eastern part of the Otjizondjupa Region. Over a great deal of time, a large population of the San community has lived in isolation as hunters and gathers. However, like most communities in Namibia, the arrival of missionaries and later the establishment of the colonial system has influenced their traditional practices. Previous studies among the San community have mainly focused on Ju/’hoan speakers, therefore, very little information exists about other San-speaking communities.

The purpose of this study was thus to capture and determine the influence that indigenous languages and homegrown philosophies have on the practices of traditional medicine among a series of San communities in Namibia.

Semi-structured questionnaires were used to conduct face-to-face interviews with participants who were  $\geq 18$  years old in the community. Purposive sampling with the aid of the snowball method was used in the sampling of participants. The data was analysed using a thematic content analysis approach. Information was gathered from participants on various subthemes including learning and teaching methods and Medicinal plant preparation. This study thus recorded and documented homegrown philosophies and traditional medicine practices of various San communities in Namibia.

The study found that the movement of the San people into various resettlements around the country has made a huge impact on their nomadic and hunter gather lifestyle. Although some settlements have tried to preserve their own identity and culture, some San have been found to be integrated into other cultures adopting the language, knowledge and culture already present in the area. Future studies should thus include more time spent in the field amongst a wide range of San communities to ensure more effective observation.

**Keywords:** San community, traditional healthcare practices, medicine

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## xvii. An Ethnobotanical Survey of IK on Medicinal Plants used to Treat Poultry Diseases in Sibinda Constituency, Zambezi Region

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### Abstract

Most Namibians in rural areas keep chickens as a source of protein. Modern veterinary medicine services are, however, costly and not very accessible in communal areas. Many small-scale poultry farmers use medicinal plants practices as an alternative to treat poultry diseases. There is however little documentation of Namibian Indigenous Knowledge (IK) on medicinal plants used to treat poultry and other livestock diseases.

The objective of this study was to investigate the use of medicinal plants in traditional management of poultry diseases or conditions in Sibinda constituency, Zambezi region.

Ethnoveterinary data was collected from 30 informants using semi-structured interviews from four villages in Sibinda constituency. Informants were initially identified by community leaders, known as Indunas in the region. Snowballing method was employed to select other potential informants. Objectives of the study were explained, and a consent form given to every IK holder who participated in the study. Demographic data (age, gender, occupation, educational levels) of all informants was recorded. Informants served as guides to identify and collect the mentioned plant species. Microsoft Excel 2013 was used for statistical analysis, including Frequency Index (FI) to identify the most common medicinal plants.

A total of sixteen medicinal plants used to treat and control various poultry diseases and parasites were identified. The most frequently named plants were Ichenka or Aloe esculenta (23.33), used to treat Avian Influenza and New castle diseases and Busibi (10), used to treat diarrhea. Other plant species identified were Kaplant or Azadirachta indica (6.67), Peri-peri or Capsicum frutescens (6.67), Mbilimbili (6.67), Chifurofuro (3.33) and Chikanamwe (3.33) treating various poultry diseases including wounds, coughing and sneezing. The most common remedy of preparing the medicinal plants was the concoction method, whereby plant parts were cut into smaller pieces, added to water and administered to chickens orally.

These are preliminary findings, and the scientific names of some of the plants are yet to be identified. The findings have generated baseline Ethnoveterinary information for poultry health management in communal areas of Namibia that could aid in the documentation and baseline data generated could lead to further research and possible discovery of new drugs as well as validation of medicinal plant use scientifically.

**Keywords:** Ethno-botanical, Indigenous Knowledge, medicinal plants, Poultry

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## RESEARCH THEME 4: NON-COMMUNICABLE DISEASES

### xviii. Understanding the role of inhibiting mitochondrial VDAC2 in the survival and proliferation of T-cell acute lymphoblastic leukemia cells.

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<sup>3</sup>Children's Hospital of Shanghai Jiao Tong Medical School, China.

#### Abstract

T-cell acute lymphoblastic leukemia (T-ALL) is an aggressive haematological tumour characterized by abnormal T-cell developmental arrest. Individuals with relapsed T-ALL have limited treatment options and a dismal prognosis. Mitochondrial function is essential for T-cell viability, and the voltage-dependent anion channel 2 (VDAC2) in the mitochondrial outer membrane interacts with pro-apoptotic BCL-2 proteins, causing apoptosis in numerous cancer cells lines.

This study sought to investigate the role of inhibiting VDAC2 in the survival and proliferation of T-ALL cells. Publicly available RNA-seq datasets were evaluated for VDAC isoform expression, and T-ALL cell lines were treated with erastin, a VDAC2 small molecule inhibitor. Publicly available datasets of RNA-seq results were analyzed for expression of VDAC isoforms and T-ALL cell lines were treated with a VDAC2 small molecular inhibitor erastin. A VDAC2 RNA interference (siRNA) was delivered to T-ALL cell lines using a retroviral vector. Functional assays were performed to investigate the impacts of VDAC2 siRNA on cell proliferation, apoptosis and survival of T-ALL cells.

Our analysis found a high expression of VDAC2 mRNA in various T-ALL cell lines. Public datasets of T-ALL RNA-seq also showed that VDAC2 is highly expressed in T-ALL ( $116.2 \pm 36.7$ ), compared to the control groups. Only two T-ALL cell lines showed sensitivity to erastin (20  $\mu\text{M}$ ) after 48 hours (about 2 days) of incubation, including Jurkat ( $\text{IC}_{50} = 3.943 \mu\text{M}$ ) and Molt4 ( $\text{IC}_{50} = 3.286 \mu\text{M}$ ), while another two T-ALL cells (CUTLL1 and RPMI 8402) had an unstable  $\text{IC}_{50}$ . However, five more T-ALL cell lines (LOUCY, CCRF-CEM, P12-ICHI, HPB-ALL, and PEER cells) showed resistance to erastin. On the contrary, all T-ALL cell lines genetically inhibited with VDAC2 siRNA led to more than 80% decrease in VDAC2 mRNA levels, and a more than 80% decrease in viability of cells transfected. The siRNA specific to VDAC2 gene, also led to suppressed proliferation and induced a sub-G1 cell cycle arrest of T-ALL cells.

In conclusion, VDAC2 is highly expressed in T-ALL cells. The inhibition of VDAC2 significantly decreased cell viability, increased apoptosis, reduced cell proliferation and caused cell cycle sub-G1 arrest of T-ALL cells.

**Keywords:** VDAC2, Mitochondrial-Mediated Apoptosis, T-Cell Acute Lymphoblastic Leukaemia, siRNA.

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## **xix. Experiences of men diagnosed with prostate cancer on the supportive care from nurses in oncology departments.**

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### **Abstract**

Literature indicates inconsistent supportive care from nurses to men diagnosed with prostate cancer (PCa) and their families in Namibia, resulting in a lack of physical, social, psychological and spiritual support to men.

This study aimed to explore and describe the experiences of men diagnosed with PCa on the supportive care received from nurses in oncology departments. The study was conducted in the oncology departments of the Intermediate Hospital Oshakati, Oshana region, Namibia. Qualitative, exploratory, descriptive, phenomenological, and contextual designs were adopted. Data were collected by means of in-depth, individual, face-to-face interviews with men (n = 11) diagnosed with PCa. A non-probability purposive sampling method was used to select information-rich participants. Data were analyzed by means of content analysis, using Tesch's eight steps of open coding.

Two themes emerged namely: (1) participants expressed different experiences of the supportive care received from nurses and (2) different experiences of inconsistent supportive care from nurses. It is apparent from the findings of the study that the supportive care provided by nurses to men diagnosed with PCa lacks a holistic approach.

Study recommendations include that there is availability of adequate, trained and coordinated members of the multidisciplinary team to facilitate supportive care aligned with men's health needs. Directions for improvement in the facilitation of supportive care are provided. This work should provide policy makers with evidence-based data for policy formulation.

**Keywords:** experiences, men, diagnosis, supportive care, prostate cancer

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## xx. Determination of birth prevalence of sickle cell disease using point of care test HemoTypeSC™ at Rundu hospital, Namibia.

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### Abstract

Sickle cell disease (SCD), a non-communicable disease, presents a high and challenging disease burden in sub-Saharan Africa. 50-90% of children with SCD die before their 5<sup>th</sup> birthday and there are between 150,000–300,000 annual SCD child deaths in Africa. In developed countries, newborn screening (NBS) has been shown to improve survival of children with sickle cell disease with under 5-year childhood mortality reduced 10-fold due to interventions carried out before development of complications. Point of care tests have been developed for resource limited settings to expand newborn screening.

The aim of the study was to determine the birth prevalence of sickle cell disease using the point of care test HemoTypeSC in a region of northern Namibia.

A cross-sectional descriptive study was carried out at Rundu Intermediate hospital in Kavango East Region. Descriptive statistics were used to compute the hemoglobin types of the study participants.

Two hundred and two (202) well newborns within 72 hours (about 3 days) of birth were recruited in the study from 22 of February to the 28<sup>th</sup> of March 2023. The majority of the participants (n=105) (52%) were female. The median age of the participants was 23 hours (Q1, Q3; 11; 33) with the age range of 2-98 hours. Sickle cell trait was present in 9.4% of the screened newborns, no homozygous disease was detected, and 90.6 % had Hb AA.

The study is the first to measure birth prevalence of HbS gene carriage using HemotypeSC point of care testing in Namibia. There was moderate prevalence of sickle cell trait but no SCD. It will provide evidence for policy makers to fashion appropriate SCD newborn screening services. This is a baseline study and will be the foundation for much larger epidemiological surveys to map HbS gene carriage in Namibia.

**Keywords:** Hemotype SC™, newborn screening, sickle cell disease

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## **xxi. Characteristics and outcomes of patients admitted to the intensive care units of the two main referral hospitals in Windhoek, Namibia: A prospective cross – sectional study**

**Yimer F.T.<sup>1\*</sup>, Sikuvi K.<sup>1,2,3</sup>, Hangula A.<sup>2</sup>, Josef M.<sup>1,3</sup>, Mutelo G.<sup>3</sup>, Nghitukwa N.<sup>2</sup>**

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### **Abstract**

There are two main referral hospitals in Windhoek Namibia, each with their own intensive care units (ICUs). However, there is a dearth of information about the patterns of ICU admitted patients in Namibia.

To determine the characteristics and outcomes of patients admitted to the respective ICUs.

A prospective multi-center cross-sectional study was used. Data was collected by trained Medical Officers using a structured, validated questionnaire, from July 2022 to June 2023. Data was analyzed using Stata-17. Median and interquartile ranges were used for numerical data. Numbers with proportions were used for categorical data. Comparison of variables as to mortality were performed with Chi square or Fisher exact test. Bivariate and multivariate logistic regression analysis were employed to identify associated factors for mortality and predictors of mortality.

285 participants were included in the analysis. Women predominated, 146 (51.23%) and the median age was 40 (IQR 31-54). Shock was the commonest diagnosis, 54 (18.95%) with septic shock accounting for 83.33%. Respiratory emergencies were the second highest, with pneumonia accounting for 43.50%. The most common reason for ICU admission was ventilatory support, 109 (37.98%). Acute kidney injury was the highest comorbidity, 99 (35.11%). The overall mortality rate was 47 (16.49%). In the multivariate analysis, patients requiring vasopressors (AOR=4.49, p value <0.003), and cardiopulmonary resuscitation (AOR=12.89, p value <0.000) were more likely to die. The overall mortality rate in the intensive care unit seems lower compared to other countries of similar settings.

A larger scale study in the country is recommended.

**Keywords:** Outcomes, Intensive care Units, Comorbidities

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## **xxii. Prevalence and risk factors of pelvic floor disorders in adolescent mothers in the Rundu district: A cross-sectional analytical study**

**Meesher I.<sup>1</sup>, Chiwaridzo M.<sup>1</sup> & von der Heiden C.<sup>1\*</sup>**

<sup>1</sup> University of Namibia, Namibia

### **Abstract**

Adolescent mothers are at higher risk of sustaining pelvic floor disorders (PFD), associated with pregnancy and childbirth than other age groups. Figures on the prevalence of PFD in adolescent mothers is lacking in current literature, and it is certainly not available in Namibian populations.

The aim of this study was to determine the prevalence and risk factors associated with PFDs in adolescent mothers in the district of Rundu, during their postpartum period.

A cross-sectional analytic study design was conducted amongst adolescent mothers (10- 19 years old) from five randomly selected clinics and health centres in the Rundu District. Data was collected from a convenience sample using the Australian Pelvic Floor Questionnaire and a self-developed demographic questionnaire. The Statistical Package for the Social Sciences (SPSS) version 29 was used for statistical analysis.

Of the 155 participants, 34.8% were 19 years old. The majority (96.1%), of the participants were not married, and the majority had attained primary level of education (70.3%). The most common mode of delivery was vaginal (86.5%) and 94% of the participants had a parity of one. For 114 (73.5%) participants, the weight of the first born was normal. The prevalence of PFD was 87.7% (95% CI = 82.6-92.9). The most prevalent PFD was bladder dysfunction (75.5%). Bowel dysfunction, pelvic organ prolapses, and sexual dysfunction were present in 67.1%, 31.0% and 31.0% of participants respectively. Chi-square analysis test found no association between mode of delivery ( $p=1.27$ ), parity ( $p=4.06$ ), and weight of the baby ( $p=1.66$ ) and PFD. No association between the risk factors and PFD was found in this sample.

Results demonstrated a high prevalence of PFD among adolescent mothers in the Rundu District. This prevalence suggests that larger studies are needed to investigate additional possible factors associated with PFD. Awareness campaigns targeting adolescent mothers through health care authority systems, may assist in reducing the occurrence of PFD in Rundu District.

**Keywords:** adolescent mother, postpartum, pelvic floor disorders, maternal morbidity

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## **RESEARCH THEME 5: ONE HEALTH**

### **xxiii. Toxoplasmosis in small ruminants in Namibia.**

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#### **Abstract**

This study aimed to determine the seroprevalence levels of *Toxoplasma gondii* in small ruminants (goats and sheep) and the associated risk factors in the Khomas region of Namibia. Further, the study investigated the presence of *T. gondii* DNA in seemingly healthy sheep and goats, meant for human consumption. Research was carried out at selected abattoirs in the Khomas region of Namibia.

299 sheep sera and 345 goat sera from 22 farming establishments were subjected to serological testing. Screening for IgG antibodies to *T. gondii* was conducted using the IDEXX Toxotest Ab® commercial ELISA kit. Additionally, 174 tissue samples were collected from different animals, consisting of 82 sheep brain samples, 79 sheep heart tissues, 10 goat brain samples, and three goat heart samples. A questionnaire was used to identify several potential risk factors associated with seropositivity.

Results show that 3.7% (11/299) of the sheep sera tested positive for *T. gondii* antibodies, with 61.5% (8/13) of sheep flocks having at least one positive animal. Only one out of 345 goat sera from 19 flocks were positive, resulting in animal-level and herd-level prevalence of 0.3% and 5.3%, respectively. Sheep flocks exhibited significantly higher animal-level and flock-level prevalence compared to goat flocks ( $p < 0.05$ ), with sheep flocks being 13.14 times more likely to be seropositive than goat flocks (OR = 13.14; CI 95%: 1.686 - 102.382). The survey revealed several potential risk factors associated with seropositivity. Among these, seropositivity in sheep was positively correlated with the total number of sheep, history of abortions, and farm size ( $p < 0.05$ ) but not with goats. Overall, 16.7% (29/174) of abattoir samples tested positive for *T. gondii* DNA through nested PCR analysis. Among sheep samples, a higher molecular prevalence was observed in heart samples at 20.3% (16/79) compared to brain samples at 14.6% (12/82) ( $p > 0.05$ ). The overall molecular prevalence for sheep was 17.4% (28/161). However, only one out of three goat brain samples tested positive, while all 10 goat heart samples were negative, resulting in an overall molecular prevalence in goats of 7.7% (1/13). The prevalence of *T. gondii* DNA was found to be higher in sheep (17.4%) compared to goats (7.7%) ( $p > 0.05$ ).

The study shows a higher likelihood of finding *T. gondii* exposure amongst sheep compared to goats and that *T. gondii* seroprevalences were lower compared to similar studies conducted in neighbouring countries and elsewhere in the world. Notably, this research presents the first in southern African work of identifying *T. gondii* DNA in abattoir tissues of slaughtered sheep and goats. These results present a significant prevalence of *T. gondii* infections in apparently healthy sheep and goat meat intended for human consumption. This may be the case across Namibia as a whole. Consequently, the authors recommended thoroughly cooking sheep and goat meat to mitigate potential transmission risks to humans. Additionally, routine vaccination of sheep and goats may help decrease the likelihood of abortions and reduce human exposure to this pathogen.

**Keywords:** Toxoplasmosis, *T. gondii*, seroprevalence,

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## xxiv. Serological evidence of Crimean - Congo haemorrhagic fever in livestock in the Omaheke region of Namibia.

**Samkange A.<sup>1</sup>, Mbiri P.<sup>1</sup>, Matomola C.O.<sup>1</sup>, Zaire G.<sup>2</sup>, Homatemi A.<sup>2</sup>, Junias E.<sup>2</sup>, Kaatura I.<sup>1</sup>, Khaiseb S.<sup>1</sup>, Ekandjo S.<sup>2</sup>, Shoopala J.<sup>2</sup>, Hausiku M.<sup>2</sup>, Shilongo A.<sup>2</sup>, Mujiwa M.L.<sup>2</sup>, Dietze K.<sup>3</sup>, Busch F.<sup>3</sup>, Winter C.<sup>4</sup>, Matos C.<sup>4</sup>, Weiss S.<sup>4</sup> & Chitanga S.<sup>1,5\*</sup>**

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### Abstract

This research examined the positivity rate of Crimean-Congo haemorrhagic fever (CCHF) antibodies in cattle and sheep within Namibia's Omaheke region after a human disease outbreak in the same geographical area.

A total of 200 samples (100 cattle and 100 sheep) were randomly collected from animals brought to two regional auction sites and tested using the ID Screen<sup>®</sup> CCHF Double Antigen Multi-Species Enzyme-Linked Immunosorbent Assay kit.

Of the cattle samples, 36% tested positive, while 22% of the sheep samples were seropositive. Cattle had a significantly higher positivity rate than sheep at the individual animal level ( $p = 0.0291$ ). At the herd level, 62.5% of cattle herds and 45.5% of sheep flocks had at least one positive animal, but this difference was statistically insignificant ( $p = 0.2475$ ). The fourteen cattle farms with at least one seropositive animal were dispersed across the Omaheke region. In contrast, the ten sheep farms with seropositive cases were mainly in the southern half of the region.

The study concluded that CCHF is endemic in the Omaheke region, and this may be the case in most of Namibia, underscoring the importance of continued surveillance and preventive measures to mitigate the impact of CCHFV on animal health and potential spillover into human populations.

**Key words:** Crimean-Congo haemorrhagic fever; haemorrhagic fever; Namibia; Tick-borne

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## xxv. Estimation of *Brucella* and *Mycobacterium bovis* contamination in bovine milk in Africa.

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### Abstract

Bovine brucellosis and tuberculosis are zoonotic bacterial diseases transmitted through the consumption of raw milk and dairy products. Many developed countries have eliminated bovine brucellosis and tuberculosis in their cattle herds. However, the diseases are still endemic in Africa. Despite the public health risk of these pathogens, the sale and consumption of unpasteurized milk are still common in some African countries.

This study aimed to estimate the prevalence of *Brucella* and *Mycobacterium bovis* in bovine milk.

A conceptual model for milk contamination was constructed and one million simulations were performed using data from published articles. *Brucella* milk contamination was estimated at a median of 8.68% (interquartile range [IQR]: 5.95-11.97%; range: 2.41-25.16%). The median prevalence of *M. bovis* was estimated at 6.86% (IQR: 4.25-9.40%; range: 0.01-15.16%).

These results indicate that there is a risk of *Brucella* and *M. bovis* transmission through the consumption of unpasteurised milk in Africa. The findings of this study highlight the need to improve the safety and quality of informally marketed milk in the region.

**Keywords:** Africa, Cattle, Milk, Zoonoses, Bacteria.

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## xxvi. Ecological Study of Marburg viruses in Zambia

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### Abstract

*Rousettus aegyptiacus* bats (Egyptian fruit bats, EFBs) are a known reservoir for orthomarburgviruses (i.e., Marburg virus and Ravn virus), which cause severe haemorrhagic fever in humans. We detected Marburg viruses in these bats from Leopards Hill cave in Lusaka Province, Zambia in 2018 and 2022. Phylogenetic analysis of their nucleoprotein genes indicated that the Zambian Marburg viruses in 2018 and 2022 were closely related to the viruses that caused outbreaks in the Democratic Republic of the Congo in 2000 and in Zimbabwe in 1975, (99.1% and 99.6% identities, respectively). This suggests that EFBs may fly further than we thought and communicate with other colonies, leading to inter-population virus transmission. However, the understanding of EFB ecology is quite limited.

To understand the host ecology, we attached short-term (17 bats) and long-term (16 bats) GPS trackers to observe their foraging and long-distance migration patterns, respectively, in April and October 2022. Short-term trackers in April revealed that bats flew about 80 km per night to forage. Some bats entered highly populated areas, while others appeared to spend a couple of days in suspected caves within the Zambezi escarpment. In October, the season when fruit trees like mangoes start to fruit, the bats travelled shorter distances and foraged in fruit trees around homestead relatively closer to the cave. Long-term trackers revealed transboundary activity, with some bats flying into Mana Pools National Park in Zimbabwe in April.

These preliminary results show that there may be communication between different bat populations, causing the transmission of various viruses among these bat colonies.

**Key words:** Marburg virus, *Rousettus aegyptiacus*, Ecology.

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## xxvii. Molecular detection and characterization of *Rickettsia* species in Ixodid ticks from selected regions of Namibia.

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### Abstract

Rickettsial pathogens are amongst the emerging and re-emerging vector-borne zoonoses of public health importance. Reports indicate human exposure to Rickettsial pathogens in Namibia through serological surveys, but there is a lack of data on infection rates in tick vectors, hindering assessment of the relative risk to humans.

Our study sought to screen Ixodid ticks collected from livestock for the presence of *Rickettsia* species to determine infection rates in ticks and the *Rickettsia* species circulating in the country.

We collected and pooled *Hyalomma* and *Rhipicephalus* ticks from two adjacent regions of Namibia (Khomas and Otjozondjupa).

An overall minimum *Rickettsia* infection rate of 8.6% (26/304) was observed, with an estimated overall pooled prevalence of 9.94% (95% CI: 6.5 – 14.3). There was no statistically significant difference in the estimated pooled prevalence between the two regions and tick genera. Based on nucleotide sequence similarity and phylogenetic analysis of the outer membrane protein B (n = 10) and citrate synthase (n = 13) genes, BLAST analysis showed similarity to *Rickettsia africae* (n = 2) and *Rickettsia aeschlimannii* (n = 12), with sequence identities ranging from 98.46 – 100%.

Our initial study in Namibia, indicates that both zoonotic *R. africae* and *R. aeschlimannii* are in circulation in the country, with *R. aeschlimannii* being the predominant species.

**Keywords:** Rickettsiae; *Rickettsia africae*; *Rickettsia aeschlimannii*; Ixodid; Ticks; Namibia

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## RESEARCH THEME 6: PHYSICAL & MENTAL HEALTH & WELL-BEING

### xxviii. Hope, resilience, and stress among first year University of Namibia students

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#### Abstract

Transitioning from secondary to tertiary education encompasses significant change. The stress caused by transitioning can lead to lower academic performance, health problems and increased dropout from university.

This study set out to determine stress levels of first year students at Windhoek campuses of the University of Namibia. Levels of hope and resilience, regarded as innate psychological resources that can buffer stress, were also determined. It was intended to establish the relationship between stress, hope, and resilience. Differences in the experienced levels of these variables in male and female students as well as in different age cohorts were investigated. The researchers were also interested in which of the variables, of hope or resilience sees to the greatest variance in stress and whether hope mediates the relationship between resilience and stress. This study rests on the tenets of the life course theory and the concept of psychological capital. Pragmatism and the “reality cycle” formed philosophical underpinnings. A deductive approach, quantitative research strategy and cross-sectional correlational design were used. The Perceived Stress Scale, Adult Hope Scale and Resilience Scale were used to gather data.

With simple random sampling, 179 male and 179 female first year students were sampled from four Windhoek-based university campuses. Above average levels of resilience (70%) with students feeling personally competent (76%) with higher self-acceptance (77%) were indicated. Relatively significant levels of stress (45%), with feelings of helplessness (42%) and questionable levels of efficiency (50%) seem to be a reality for first year students. Above average levels of hope were indicated (73%), whilst participants indicated above average levels of motivation (agency 72%) and life direction (pathways 75%). A large positive correlation was found between hope and resilience. Medium-level positive relationships were also found between resilience and stress and hope and stress. Hope and resilience explain 22% of the variance in stress with hope seeing to largest variance in stress if resilience is controlled for. Hope mediates the relationship between resilience and stress. A statistically significant difference was found for the stress, hope and resilience levels of the 18-25 years age cohort and the 26-33 years age cohort whilst statistically significant differences were found in stress and hope levels of male and female students.

It is recommended that the construct of stress is investigated, with an emphasis on establishing possible positive emotions present in the stress inducing processes. A qualitative study of the reasons for increased stress levels with first year students is also recommended.

**Keywords:** academic performance, stress, resilience

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## **xxix. Perspectives of service providers on factors that should be considered for vocational rehabilitation of mental health service users in Namibia: a qualitative study.**

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### **Abstract**

Chronic mental illness disrupts the ability to work, often resulting in the need for vocational rehabilitation in which occupational therapists play a role. Namibia does not have an occupational therapy vocational rehabilitation practice framework for service users with chronic mental illness.

This study explored the contextual factors that should be considered for a vocational rehabilitation practice framework in Namibia. A qualitative collective case study design was utilized. In-depth interviews were conducted with nine mental health service providers that were purposively selected from two study sites. An inductive thematic analysis of data was done using ATLAS.ti.

The results suggest that there is a need for collaborative advocacy for service users to raise awareness and engage stakeholders such as family members, employers and policy makers was highlighted. Vocational rehabilitation resources are needed including sheltered workshops, financial resources and trained human resources. Recognition that vocational rehabilitation services are too limited to meet the needs of mental health service users. A vocational rehabilitation policy and strategy is required. Supported employment and self-employment are potential strategies that should be considered. Vocational rehabilitation for service users with chronic mental illness is limited in Namibia and there is a need to collaboratively improve the service.

It is recommended that Occupational therapists could collaboratively advocate for vocational rehabilitation of mental health service users in low-income and middle-income countries such as Namibia. Occupational therapists might employ a human rights approach to vocational rehabilitation with emphasis on promotion of reasonable accommodation for service users in the workplace.

**Keywords:** Vocational rehabilitation, Chronic mental illness, occupational therapists.

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**xxx. Influence of gender and community setting on 24hr movement behaviour of children under the age of 5 years in Namibia: A cross-sectional pilot study.**

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**Abstract**

In 2019, the World Health Organization (WHO) released recommended guidelines for physical activity, sedentary behaviour and sleep for children under the age of 5 years. However, it is unclear what proportion of children in Namibia meet the stipulated guidelines.

As part of a large international study, the SUNRISE Namibia study was conducted to estimate the proportion of three-and-four-year-old children who meet the WHO global guidelines for physical activity, sedentary and sleep behaviour. Further this work was designed to establish the influence of gender (boys vs girls) and community setting (urban vs rural) on the 24hr movement behaviour, gross and fine motor skills and mental function of the children.

Using a cross-sectional study design was used, and children were recruited from urban and rural schools in Namibia. Children's anthropometry data, 24 hr movement behaviour measured by an accelerometer, lower-body explosive strength, physical capacity, balance, upper extremity strength, dexterity and the executive mental function (inhibition and working memory) were all assessed using validated methods. SPSS version 29 was used for statistical analysis with significance levels set at  $p < 0.05$ .

89 children were recruited from urban ( $n=50$ ) and rural ( $n=39$ ) schools. Only 12% of the sample participants met all the recommended guidelines for movement behaviour. However, the proportions of children meeting the WHO guidelines for physical activity, sedentary behaviour and sleep were 77%, 27%, and 67%, respectively. Significant differences ( $p < 0.05$ ) were found between boys and girls with regards to physical capacity, upper extremity strength, and executive mental function scores. Rural children performed significantly better ( $p < 0.05$ ) in all variables, except in executive mental functions.

Cognisant of the study limitations, only a small proportion of children in the study met all the WHO guidelines. Further large investigations are needed at national level to ascertain the movement behaviours of Namibian children.

**Keywords:** physical activity, screen time, sleep, movement behaviour, children

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**xxxii. Does work-life balance matter for working mothers' engagement at work?  
A case of working mothers in Windhoek, Namibia.**

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Working mothers are committed to advancing the mandate of the organisations that employ them, yet they also very frequently bear the pre-existing and important responsibilities of household care and child-rearing. This can impact their ability to maintain a healthy work-life balance. This research aims to investigate the global concept of work-life balance among working mothers in Namibian, with a particular interest in how it influences their work engagement.

In this cross-sectional survey, a positivist approach was used to collect data from working mothers in Windhoek ( $n=200$ ), using purposive sampling.

We found a significant inverse relationship between family-to-work conflict and work engagement. Additionally, there was an inverse relationship between work-family conflict, family-to-work conflict and working mothers' vigour at work, one of the dimensions of work engagement. Family-to-work conflict was found to negatively affect working mothers' absorption at work, another factor of work engagement.

Organisations, regardless of size, should recognise the important roles played by working mothers and implement interventions to mitigate negative spill overs between home and work responsibilities, ultimately enhancing work engagement.

**Keywords:** Work engagement, work family conflict, family work conflict, working mothers, Windhoek

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## **xxxii. Unlocking the puzzle: Investigating factors associated with relapse among mentally ill patients at Intermediate Hospital Oshakati, Oshana Region, Namibia.**

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### **Abstract**

Among mentally ill patients, relapse is a significant concern globally, impacting individuals, families, and societies.

This study investigates the factors contributing to relapse among mentally ill patients receiving care at Intermediate Hospital Oshakati, Oshana Region, Namibia. Utilizing a quantitative, cross-sectional approach, data was collected through self-administered questionnaires and researcher-administered questionnaires from patients and caregivers. Statistical analyses, including multiple linear regression and bivariate logistic regression, were employed to identify predictors of relapse.

Data was collected from 196 patients and n=196 caregivers. Findings highlight several critical factors associated with relapse, including medication non-adherence due to side effects, limited access to medications in rural areas, substance use, and insufficient health education. Stressful life events, visual hallucinations, and sleep disturbances were also strongly linked to relapse.

Recommendations stemming from these findings emphasize the importance of enhancing health education initiatives, implementing home visit programs, and providing support services for patients and caregivers. Additionally, strategies to monitor medication adherence and improve access to mental health services in rural areas are crucial. Addressing substances through targeted interventions is underscored as pivotal in preventing relapses. This study contributes valuable insights for policymakers, healthcare providers, and stakeholders, aiming to mitigate relapse rates and enhance the overall well-being of mentally ill individuals in Namibia. By addressing these factors, we can pave the way for more effective interventions and improved mental health outcomes.

**Keywords:** Mental illness, Relapse, Caregivers, Medication adherence, Substance use, Health education

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### **xxxiii. Experiences of Single elderlies living in Old Age Homes: Narrative Literature Review**

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#### **Abstract**

Modern society is confronted with an increase in the number of old people worldwide. This steady increase in the number of elderly people raises a question regarding their care (Hedge et al. 2012). The majority of the elderlies are single due to the demise of their spouses, which presents a dilemma for their wellbeing as they are physically weak leading to dependency on other family members. These changes in their lives often force them to move from their houses to old-age homes.

A narrative literature review was employed in this study. Literature included both qualitative and quantitative studies. Computer search through major data bases such as google scholar, PubMed, Research gate, Science direct, Scopus and technical agencies reports were utilized to obtain peer reviewed journal articles, documents and official reports on single elderlies in old age homes. Data were analyzed using content analysis.

The study shows that most elderlies' experience challenges in adjusting to new environments often feel lonely and lack companionship. In addition, single elderly people very often are afraid of the unknown. This leads to a sense of sorrow and dissatisfaction and ultimately to depression. However, the study also indicated that some of the single elderlies feel a sense of independence, financial freedom, security and good access to good medical attention. The study further revealed that single elderlies were at the old age home because of the death of a spouse and had experienced deterioration in health, and inability to care for themselves due to physical frailty. Other reasons for moving to an old-age home include overcrowded houses that ultimately lead to their neglect by family members who refuse to care for elderly people.

Therefore, the study recommends the establishment of additional old-age homes in Namibia to respond to the increasing number of elderlies, the introduction of recreational facilities in old age homes and psychosocial support for institutionalized elderlies.

**Key words:** Experiences, Old age homes, Single elderlies

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## xxxiv. Implementation of guidelines to manage perinatal depression in Windhoek, Namibia

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### Abstract

Perinatal mental health guidelines are still lacking in more than 80% of low- and middle-income countries. The World Health Organization has outlined the importance of an evidence-informed approach for developing and sustaining high-quality integrated mental health services for women during the perinatal period.

The study explored the perceptions of healthcare providers on implementing guidelines to manage perinatal depression in primary healthcare settings in Windhoek. A qualitative, explorative, descriptive, and contextual design was applied to collect data from a purposively selected sample of 12 healthcare providers. This involved two focus groups with healthcare providers. Thematic analysis of the interview transcripts was conducted simultaneously with data collection.

The study highlighted three major themes for the successful implementation of the guidelines to manage perinatal depression namely,

- a. the significance of being seen to implement the guidelines to manage perinatal depression,
- b. integration of the guidelines to manage perinatal depression into perinatal care settings, and
- c. barriers to the implementation of the guidelines to manage perinatal depression.

Healthcare providers were aware of poor maternal mental health provision within perinatal care settings and were ready to implement guidelines to manage perinatal depression. Professional training and continuous education on perinatal depression are fundamental components in fostering quality of care, and community awareness as well as improving stigma within the community and healthcare providers.

**Keywords:** depression, implementation, perinatal depression, perinatal period, perinatal guidelines

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## xxxv. Violence exposure and mental health outcomes in children aged 13 -17: Findings from the 2019 Namibia VACs Survey.

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### Abstract

There is a paucity of research on the factors implicated in mental health problems in children in Namibia. This is particularly concerning as Namibia reports some of the highest suicide rates in Africa.

The current analysis uses data from the 2019 Namibia Violence against Children Survey (VACS) to explore the role of violence exposure in child mental health and suicidal behaviors. The Namibia VACS (2019) was a nationally representative, cross-sectional survey assessing the prevalence and circumstances of childhood violence in the country. Overall, 5191 participants aged 13-24 took part in the VACS survey. Data was collected via questionnaires on the various topics including demographics; education; family and peer relationships; experiences of physical, sexual, and emotional violence; mental distress and suicidal behaviors.

This analysis used the data of children aged 13-17 (n=2192) to determine the prevalence of violence exposure in the peer and family context and to explore the association between violence exposure, mental distress, and suicidal ideation. Overall, 415 males and 1777 females are included in the analysis. *Crica.* one in five children (18.4%) reported either emotional or physical violence from an adult caregiver and 42.9% of children reported either emotional or physical violence from a peer within the last 12 months. Overall, 15.3% of participants had moderate-severe levels of mental distress and 5% reported suicidal ideation with girls reporting significantly higher levels of mental distress and suicidal ideation. Children who experience violence have significantly increased odds (up to 5 times for females) for experiencing moderate to severe distress as well as suicidal ideation.

The findings suggest that interventions aimed at reducing violence exposure for all children should be a priority. Secondly, strengthening access to mental health services to children exposed to violence can help mitigate some negative consequences.

**Keywords:** Children, mental health, suicidal ideation, peer and family violence, physical and emotional violence.

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## **OTHER HEALTH RESEARCH**

### **xxxvi. Cattle Identification Practices in Namibia: A potential Welfare Concern.**

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#### **Abstract**

This paper aimed to identify whether cattle identification practices are of a welfare concern in Namibia.

Cattle identification measures of hot iron branding and ear tagging practices were evaluated as part of a combined forty-welfare measures protocol designed for extensive beef systems in Namibia. The protocol was applied to 55 beef farms (17 commercial farms, 20 semi-commercial and 18 communal village farms) during pregnancy testing, and a questionnaire guided interview captured management of cattle over the previous 12 months. The age at branding, use/not use of local anaesthetic, presence of branding marks and wounds, and extraneous cattle marking was evaluated. The age at ear tagging was recorded as well as extraneous ear-notching. The categorised measures on a 3-point welfare score (0: good, 1: marginal, and 2: poor/unacceptable welfare) were subsequently compared with the derivation of thresholds based upon the poorest 15% and best 50% of herds for each measure.

The analysis showed that procedures were performed without the use of anaesthesia or analgesics on all the farms. The median (at 95% CI) showed that multiple brands/wounds/cuts were more in communal village farms (5.3%; maximum 87% of cattle at one farm), followed by semi-commercial (2.8%) and less at commercial farms (0.8%). On commercial farms, stud breeders (5/17) used an extra brand on stud cattle while, on village farms additional brands (e.g., letters, names, certain signs) as well as markings (e.g., dew-lap skin-flap cutting) were used for security and easy identification. The village farms had derived thresholds that were  $\geq 3$  times higher than their imposed thresholds for extraneous brands/cuts, indicating a trait with a high occurrence at these farm types. All farm types identified cattle with ear tags (marginal welfare), while most herds at the village herds had poor scores for ear notching (with knives. In relation to branding, the mode for age was 2 months at commercial farms, while it was 6 months at the village herds contravening national guidelines of performing painful procedures at less than 2 months.

Thus, cattle identification, for whatever reason, was a welfare issue on all farms, more so at the village farms. This evidence can be used to bring awareness and implementation of mitigation strategies. Hence, the mounting scientific evidence that relates hot-iron branding to the welfare compromise of cattle could guide Namibia to abolish hot-iron branding and join many countries that are increasingly prohibiting this practice. Alternatively, the country could opt for microchipping for identification or freeze branding or the use of cooling gel to reduce pain sensitivity and aid in faster brand wound healing.

**Keywords:** Animal Welfare, Cattle identification, Namibia

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## xxxvii. Application of Prolotherapy and PRP as an Alternative Option for Cranial Cruciate Ligament Rupture (CCLR) Treatment in dogs

**Bwalya E.C.<sup>1\*</sup>**

<sup>1</sup> University of Zambia

### **Abstract**

The cranial cruciate ligament (CCL) is one of several ligaments in the stifle that connect the femur to the tibia. The CCL has 3 main functions: Prevent the tibia from sliding forward in relation to the femur; Prevent the stifle from hyperextending; Prevent the tibia from internally rotating. Its rupture, either partial or complete, leads to connective tissue insufficiency in the stifle resulting in pain leading to lameness and ultimately osteoarthritis. The mainstay management of cranial cruciate ligament rapture (CCLR) is mainly surgical, that is, tibial plateau levelling osteotomy (TPLO) or tibial tuberosity advancement (TTA) and the more commonly performed extracapsular lateral suture technique. However, orthopaedic surgeries are generally expensive and invasive with increased rehabilitation time. Proliferative therapy is considered a cheaper and minimally invasive procedure that is used as an alternative to avert the need for orthopaedic surgery. Prolotherapy (PRP) is performed with natural proliferating and sclerosing agents. It is injected into the afflicted ligament or tendon causing inflammation as well as microtrauma by injecting (pecking) the bone. The inflammation or microtrauma causes an inflammatory response, and the immune system produces an army of fibroblasts, which synthesize extracellular matrix and collagen. The collagen is needed to thicken, tighten, and strengthen ligaments and tendons. Conversely, platelet rich plasma (PRP) is defined as an autologous super concentrate of platelets (which produces any growth factors) used to accelerate healing in injured live tissues.

The application of both Prolotherapy and PRP in the same canine patient provides a prospective alternative approach to treatment of CCLR in dogs.

Based on our practical clinical experiences, both the positive/beneficial and negative clinical outcomes of Prolotherapy and PRP are discussed as part of a review.

**Key Words:** Prolotherapy, Platelet-Rich-Plasma, CCLR, dog

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## xxxviii. Clinical learning experiences of advanced post graduate midwives and neonatal nursing care student nurses at a university

**Kadhila, JG**

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### **Abstract**

Clinical learning experience has over the years become an important element of preparing nursing students for what they will be facing on a full-time basis once they are registered nurses.

The objective of the study was to investigate the experience of advanced midwifery and neonatal care nursing students regarding their clinical practice at the University of Namibia, Khomas region. Methodology: This study adopted qualitative research design. Purposive sampling was utilized to select 12 participants who were achieved at a point of saturation and took part in the study through a face-to-face interview. Data for this study was analysed using thematic analysis.

The study found that there was a mixture of good and bad experiences when it came to clinical learning in the maternity ward. The good experiences revolved around gaining the much-needed practical experience and skills to handle various procedures and use various machines and equipment in the ward. On the other hand, the bad experiences revolved around the lack of adequate support and negative attitudes from registered nurses which made the experience unpleasant.

Overall, the clinical learning experience of the students drew on a wide array of experiences that showed the benefit of clinical learning and certain of its bad aspects.

**Key words:** Perception, neonatal care, midwives, clinical learning, student nurses

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### **xxxix. Perceived facilitators and barriers to routine utilization of standardised outcome measures by registered physiotherapists in Namibia: Implications for clinical policy change in the era of evidence-based practice**

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#### **Abstract**

Globally, physiotherapists (PTs) are recommended to use standardized outcome measures (SOMs) in clinical practice to evaluate the responsiveness of the patients' baseline condition to the instituted physiotherapy (PT) interventions. However, professional appeals from regulatory bodies have not led to an improvement in SOMs utilisation especially in Africa. In Namibia, there is dearth of published literature on the utilisation rates and the challenges faced by PTs with regards to SOMs utilisation.

Therefore, this study determined context-specific perceived facilitators and barriers to routine utilisation of SOMs by clinical physiotherapists (PTs) and interns working in Namibia.

A nationwide questionnaire-based cross-sectional survey was conducted online. All registered PTs and qualified interns working in private or public clinics/hospitals were invited to participate. The main outcome measures were routine utilisation operationally defined as using SOMs 70% to 100% of the time in clinical practice, and perceived facilitators and barriers to routine utilisation. SPSS version 29.0 was used for the main study analysis. Frequencies were computed for all categorical data.

Of the PTs who responded, the majority, were females (n=64, 66.7%), had a bachelor's degree (n=86, 89.6%), trained outside Namibia (n=82, 85.4%) and were working in private (n=74, n=77.1%). About half of the participants (n=47, 49.0%) routinely used different SOMs, mainly inclined to the assessments of impairments. The most common reasons for facilitating SOMs utilization are related to affordability and availability. However, about a quarter (n=41, 43.6%) were strongly deterred from using SOMs because of language of construction of the tool, whilst 36.2% (n=34) highlighted that most SOMs had a higher reading proficiency incommensurate with the patient population. Time-related barriers were perceived by 34.0% (n=32) of the participants as an important barrier.

Routine utilisation of SOMs by PTs is still uncommon in Namibia hindered mainly by tool-related factors such as the language of construction.

**Keywords:** Physiotherapy, Outcome-measures, Namibia, Barriers, Facilitators

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## **xl. Clinical Learning Experiences of Postgraduate Nursing Students in The Operating Room Units at State Hospitals**

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### **Abstract**

Operating room is a dynamic and complicated area where the safety of patients undergoing surgery requires great priority. Clinical learning is an important aspect of nursing education because nursing is a practice profession. Challenges within the clinical environment that hamper the effectiveness of clinical learning, and the attainment of clinical competence must be identified to proffer solutions.

The objective of the study is to explore the clinical learning experiences of postgraduate nursing students in the operating room units at the state hospitals in Khomas region, Namibia. Methods: A qualitative, exploratory, descriptive, and contextual study design was used with purposive sampling. Saturation of data was achieved at 9 postgraduate operating room nursing students who participated in the study. Data was collected through in-depth interviews using an interview guide. The data collected was analyzed using thematic analysis.

Three main themes emerged during the discussions which are interpersonal factors, educational factors, and operating room context. Students had negative experiences like working with rude nurses, being shouted at, fear and panic due to first-time exposure, shortage of equipment, and being overworked.

It can be concluded that students had positive learning experiences, they were exposed to a wide range of surgical procedures, advanced technology, and instruments that they had never seen before. Students further had negative experiences such as a shortage of instruments and supplies in theatre resulting in cancellation and postponement of procedures which led to students missing out on experiencing some of the rare procedures and delaying completion of their logbook. Students were overworked by nurses and unit managers to cover up their shortage of staffing not considering that postgraduate students were there in the capacity of a student not registered nurse they have to learn.

**Keywords:** Clinical learning environment, Experience, Postgraduate nursing student, Operating room units

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