



THE 10TH WORLD CONFEDERATION FOR PHYSICAL THERAPY AFRICAN REGION CONGRESS

FROM ADVOCACY TO ACTION AGAINST NON- COMMUNICABLE DISEASES

19TH – 24TH MAY 2014



PROGRAM AND ABSTRACTS

ACKNOWLEDGEMENTS

We wish to thank the Ministry of Health, Zambia for its generous contribution towards the hosting of the 10th Biannual World Confederation for Physical Therapy Africa Region Congress 2014.

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WELCOME REMARKS

MESSAGE FROM THE AFRICAN REPRESENTATIVE ON THE WCPT EXECUTIVE COMMITTEE



Dr. Joyce Mothabeng

BSc. Physiotherapy; Diploma in Tertiary Education;
M. Physiotherapy; PhD (SCI Rehabilitation)
Academic Leadership program

Fellow Africans

Once again, the world of African physiotherapists meets in Zambia, the land of *Musi-o-tunya*! It feels like yesterday when Zambia opened its doors for us in 2004. With non-communicable diseases threatening the quality of the longer lives we are living, it is befitting that the Zambian physiotherapists decided we should tackle this problem as a continent. The WHO has been discussing this scourge for the past 15 old years. It is time we as physiotherapists, who are experts in exercise, the 'panacea' for NCD, stood up and took action. Moving from advocacy to action is a very timely theme for this congress. The WCPT has numerous policy documents dealing with NCD and a forum like this congress provides a platform to interrogate these documents for implementation. It is time we moved from paper to practice – LET US TAKE ACTION AGAINST NCDs.

Now is the time – forward with quality physiotherapy services in Africa!

Dr. DJ Mothabeng

MESSAGE FROM THE PRESIDENT OF THE ZAMBIA SOCIETY OF PHYSIOTHERAPY



Ms. Mary Seliya Sakala-Mumba

Head of Department and Principal Physiotherapist: Levy
Mwanawasa General Hospital (LMGH), Cardiac Health Hospital

Areas of interest: Healthy Lifestyle Advocacy; Health Promotion;
Teaching and Research

Other activities: In-charge of Quality Improvement & Assurance
for LMGH; Pioneer and first coordinator of BSc Physiotherapy
programme at Lusaka Apex Medical University (LAMU); Part- time
lecturer at University of Zambia (UNZA) and LMU.

Fellow Africa Region Physiotherapy Practitioners and International Physiotherapy
Practitioners worldwide!

On behalf of the Zambia Society of Physiotherapy and the Africa Region of the World
Confederation for Physical Therapy (WCPT Africa) I am honored and humbled to welcome
you all to the 10th WCPT Africa congress. I would like to say a special welcome to all
those that are coming to Africa, Zambia and Lusaka for the very first time. The theme of
the 10th bi-annual Africa region Congress “**From advocacy to action against non-
communicable diseases (NCDs)**” is aimed at enriching and enabling the advancement of
physiotherapy and physical rehabilitation practices on the continent. The theme embraces
all sectors of the population, young and old, employed or not, all races, genders and social
classes. I urge all of you that have had this chance, to maximize this opportunity.

While in Zambia take some time to explore the most rapidly developing city of Lusaka and
to tour breath taking heritage sites around the country. This is the chance of your life time
to see the “**Mighty Victoria Falls**” (the smoke that thunders) one of the Seven Wonders
of the World. Take time while in Zambia to visit the largest Man-made lake Kariba in
Siavonga, and Africa's richest animal sanctuary in our game parks and many, many more.
Explore Zambia and have an amazing experience.

You are all invited to join us in whichever mode to our golden jubilee celebration of
independence this year “2014”.

Mary S.S. Mumba

MESSAGE FROM THE CHAIRPERSON OF THE LOCAL ORGANISING COMMITTEE



Mr. George M Chigali

BSc (Hons.), MPH Zambia

Dear delegates

It is a great honor and privilege to welcome you all to Zambia and to the 10th Biannual Congress of the World Confederation of Physical Therapy, Africa Region.

It has been a long journey since the World Confederation of Physical Therapy made a decision on regionalization in the 1980s. Regionalization was meant to improve coordination and communication of the World Confederation for Physical Therapy to enhance the development of Physical Therapy worldwide. I am glad to state that this is happening. The Physical Therapy profession has indeed grown significantly both in terms of theoretical knowledge and practice. This in turn has immense benefits to our clients whom we serve.

As professionals we must keep striving to improve on the current body of knowledge and practice to ensure that we are not left behind by the current fast changing technological advancement in prevention and treatment of various ailments. We must encourage research to explore better ways of facing the existing and emerging health challenges. We must commit ourselves to partner with other progressive forces to face the health challenges head on, for the betterment of the future generation to come. This congress should provide such a platform. Let us exchange information, knowledge mutually benefiting our countries, continents and indeed the world at large.

As Zambia, we are happy that we were given this opportunity to host the 10th Biannual Congress. The country is endowed with vast natural resources that range from the Mighty Victoria Falls, locally known as Musi-O-Tunya, the smoke that thunders, to huge sanctuaries of birds and animal species, together let us explore them.

Let the Almighty God bless you all.

George M. Chigali

SPEAKERS FOR THE WCPT AFRICA 2014 CONGRESS

1. Prof. Marilyn Moffat (U.S.A)

THEME: PHYSICAL ACTIVITY AND EXERCISE IN NCD MANAGEMENT



Marilyn Moffat is President of WCPT and Professor of Physical Therapy at New York University, where she directs both the professional doctoral program and the post-professional graduate master's degree program in pathokinesiology. She has been in private practice for over forty years and currently practices in the New York area. She is a former President of the American Physical Therapy Association (APTA) and a member of the Board of Trustees of the Foundation for Physical Therapy. She has published several books, including some for the lay audience. She has given over 800 professional presentations and has taught and provided consultation services around the world. Dr Moffat is a Catherine Worthingham Fellow of the APTA and has been the recipient of several international awards including WCPT's Mildred Elson award. She is also currently on the Board of Directors of the World Rehabilitation Fund and is a member of the Executive Committee.

2. Prof. Aimée Stewart (RSA)

THEME: PHYSIOTHERAPY RESEARCH FOR NCD MANAGEMENT



Aimée is Associate Professor at the University of the Witwatersrand, South Africa. Her main research areas of interest are the management of chronic diseases including HIV/AIDS, as well as the roles of caregivers and families in rehabilitation. She has acted as an external examiner for universities in South Africa, Rwanda, Zimbabwe, Australia and New Zealand. She has over 85 publications in peer-reviewed journals and has made over 60 presentations at various congresses. In 2011 she was awarded the South African Department of Science and Technology "Distinguished Women in Science" award. Aimée is Chair of the ISC for WCPT 2015 AND was also the WCPT Africa Region's representative on the ISC for World Physical Therapy 2011. She has also been on a number of committees for both local SASP conferences and WCPT Africa Congresses.

3. Dr. Emmanuel Babatunde John (NIGERIA)

THEME: STROKE REHABILITATION, AN UPDATE

Nigeria born Emmanuel Babatunde John, BSPT, PhD, is currently an Associate Professor of Physical Therapy and Director, Motor Control and Neuromuscular Performance Laboratory at Radford University (RU), Roanoke, VA, USA since August 2011. Apart from his teaching responsibilities at RU, Dr. John conducts motor control and neuro-rehabilitation research on the effects of gender, age-related changes and neurological lesions on sense of motor effort using a feed-forward model of human voluntary motor tasks performance. Dr. John is multi-talented. In his spare time he design websites and is committed to putting Africa Physiotherapy on the worldwide web. He designed websites for the Nigerian Association of Physiotherapy Students (<http://www.nigaps.org>), University Of Lagos Association Of Physiotherapy Students (<http://www.ulaps.org>), Nigeria Society of Physiotherapy (<http://www.nigeriaphysio.org>) and the World Congress for Physical Therapy - Africa Region (<http://www.wcptafrica.org>).



4. Dr. Joyce Mothabeng (RSA)

THEME: DISABILITY AND NON-COMMUNICABLE DISEASES

Dr. Mothabeng is currently a senior lecturer, research coordinator and deputy head in the department of Physiotherapy, University of Pretoria. Her main area of teaching is Disability and rehabilitation, with special interest Spinal cord injury (SCI) rehabilitation. Other subjects include professional development, ethics and applied research. She is currently pursuing post-doctoral research on Health promotion for people with SCI, and has four masters and one PhD student in her research focus. She is actively involved in the Southern Africa Spinal Cord Association (SASCA) as treasurer on the executive committee and is a member of the International Spinal Cord Society (ISCoS).



Dr. Mothabeng has been actively participating in WCPT Africa congresses since 1998 through free papers, posters, invited papers and keynote papers. She is currently the administrator of the regional WCPT Africa office, and serves as the Africa member on the WCPT executive. She has served in various positions in her country, in the South African Society of Physiotherapy (SASP) since 1994 and is currently the past chairman of the Education Committee of the SASP and a member of the Board of Trustees of the SASP Education Trust. She is one of the seven Africans who will be presenting focused symposia at the 2015 World Physical Therapy congress in Singapore.

Dr Esther Munalula Nkandu (Zambia)

THEME: PALLIATIVE CARE

Dr. Esther Munalula Nkandu is a Physiotherapist and a Bioethicist. She has headed the Department of Physiotherapy in the University of Zambia (UNZA), School of Medicine from inception in 2000 to September, 2013. As a Physiotherapist she has presided over the Zambia Society of Physiotherapy and is the Immediate Past President for Africa Region of the World Confederation for Physical Therapy.



As a Bioethicist she has chaired the Biomedical Research Ethics Committee in the School of Medicine for over 5 years and now serves as Ex-officio. She is a Member of the Zambia National Health Research Ethics Committee, Vice Chairperson of UNZA Natural and Applied Science Research Ethics Committee, and also serves as Chairperson of the ERES Converge IRB. In collaboration with other universities in Europe, she has served as a visiting Scholar and Coordinator of the Research Ethics Course on the Erasmus Mundus Master of Bioethics in Italy. She is also a recipient as PI/Coordinator of EDCTP and CDC funded activities.

Dr. Munalula is a Member of the University of Zambia Senate on which she represents the School of Medicine. Outside the University of Zambia she has served on various Boards. She is a trainer in Corporate Governance and also serves as a Board Member of the Institute of Directors (Zambia). Further, she is the Chairperson of the Radiation Protection Authority of Zambia.

5. Mr. George Chigali (Zambia)

THEME: “NCDS – A Growing Public Health Concern”

Mr. George Chigali is a Physiotherapist/Public Health Specialist with more than 30 years of experience in Physiotherapy and Public Health. He currently is serving as Provincial Program Manager for Family Health International (FHI360), under the Zambia Prevention, Care and Treatment Partnership (ZPCT II) where he is responsible for coordination and leading the ZPCT team in program planning, implementation, design, review and monitoring the HIV/AIDS activities in Central Province.



In 2012 he was nominated for FHI360, IMPACT Award for providing good leadership for the ZPCT II program in the Province. Mr. Chigali is one of the founder members of WCPT-A having participated in drawing up the WCPT-A Charter. He also was president of the Zambia Society of Physiotherapy for over ten years.

Mr. Chigali is the chair of the Local Organizing Committee (LOC) for the WCPT-A Congress.

***10TH WORLD
CONFEDERATION FOR
PHYSICAL THERAPY
AFRICAN REGION
GENERAL MEETING AND
CONGRESS***

Program

*Hosted by Zambia Society of
Physiotherapy*

***NEW GOVERNMENT COMPLEX,
LUSAKA, ZAMBIA***

Monday: 19 May 2014	
08.00 – 16.00	WCPT AFRICA GENERAL MEETING – separate program (<u>ACCREDITED DELEGATES ONLY</u>)

Tuesday 20 May 2014: PRECONGRESS WORKSHOPS (separate fee – 50 USD)			
7.00 – 08.00	Pre-Congress Workshop Registration		
08.00 – 16.00	WORKSHOP 1: International Classification of Functioning Disability and Health ICF) Prof J Jelsma	WORKSHOP 2: Critical Appraisal Prof Aimee Stewart (WITS)	WORKSHOP 3: Evidence Based Stroke Rehabilitation Dr EB John and Team (Nigeria/USA)
	Coordinator – Ajediran I. Bello	Coordinator – Calleb Ademola Gbiri	Coordinator – Ronel Roos
19.00 -21.00	CONGRESS WELCOME RECEPTION (His Honor Lusaka Mayor)		

Wednesday 21 May 2014: CONGRESS Day 1	
7.30 – 9:00	Congress Registration
9.00 – 9.30	TEA/COFFEE
09.30 – 09.45	Housekeeping – Ms. Mary Mumba (ZSP President)
09.45 – 12.00	CONGRESS OPENING CEREMONY Ceremony Chair – George Chigali (Congress 2014 2014 LOC Chair)
	Participants: M Mumba - ZSP President (10 min) J Gasherebuka -WCPT Africa chairman (10 min) M Moffat - WCPT President (10 min) J Mothabeng - WCPT Africa Regional Representative (10 min) WHO Representative (10 min) Zambia Minister of Health (20 min) Guest of Honour His Excellence the President of the Republic of Zambia (40 min)

12.00 – 12.55	LUNCH - Exhibition and Posters Session 1: Coordinator – Abiola Oladele Ogundale <ul style="list-style-type: none"> The use of portfolios in community physiotherapy and public health teaching to enhance reflective practice – <i>Morake Douglas Maleka</i> The Impact of Physiotherapy in Palliative Care in a Nigerian Tertiary Hospital - <i>Nnenna Nina Chigbo, Chris Chim Amah, Tonia Onyeka, Martins Nweke, Emmanuel Nwigwe, Chris Onugha, Stanley Idu</i> The effects of Progressive Goal Attainment Programme and standard treatment on selected treatment outcomes in patients presenting with mechanical Low back pain: Preliminary Reports - <i>Michael Opeoluwa Ogunlana, Adesola Christiana Odole, Adebayo Adejumo</i> Influence of dominant body somatotype and sex difference on q- angle and some selected skeletal measures of young adults in south-eastern Nigeria - <i>Peter Olanrewaju ibikunle</i> Perception of Direct Access and Patients' Self-Referral among Nigerian Physical Therapists - <i>Chidozie Emmanuel Mbada, Kayode David Ojetola, Rufus Adesoji Adedoyin, Abiola Oladele Ogundele, Olubusola Esther Johnson, Taofeek Oluwole Awotidebe, Teslim Ayodele Onigbinde</i> Value of physiotherapy in enhancing basic activities of daily living in HIV/AIDS home based - <i>Billiat Chongo</i> High prevalence, multiplicity and clustering lifestyle and modifiable Cardiovascular disease risk factors among rural adolescents in South west Nigeria; Implication for CVD prevention program at the grass root level - <i>Nse Odunaiya</i> Body Circumference Parameter as Predictor of Percent Body Fat for Female Undergraduates in a Nigeria University Community - <i>Ojo Adesola Ojoawo, Solomon A Adeyanju</i> 		
13.00 – 15.00	PLENARY SESSION: Chair – Martha Banda-Chalwe (Scientific committee chairman)		
	Keynote Speaker 1: Prof Marylin Moffat Keynote speaker 2: Dr Emmanuel B John Keynote speaker 3 Dr Esther Munalula Nkandu		
15.00 – 15.30	TEA/COFFEE		
15.30– 17.30	Parallel Free Paper Sessions (15 min presentations + 5 min questions)		
	SESSION 1: Chair – Mrs Mary Mumba	SESSION 2: Chair – Bashir Kaka	SESSION 3: Chair – Mr Peter DC Phiri
	Stroke & Stroke Rehabilitation 1. Risk Factors Associated with Post-Stroke Depression in Patients Attending Physiotherapy Clinic at the University of Nigeria Teaching Hospital Ituku/Ozalla - <i>Sam Chidi Ibeneme, Akachukwu Obileke Nwosu, Georgian Chiaka Ibeneme, muideem Bakare</i>	Obstetrics, Gynaecology and Women's Health 1. Knowledge, Attitude and Practice of Antenatal and Postnatal Exercises among Antenatal and Postnatal Women - <i>Chidozie Emmanuel Mbada, Olubukayomi Ebunoluwa Adebayo, Adebajo Babalola Adeyemi, Olabisi Aderonke Akinwande, Olumide Olanakanmi Dada, Taofeek Oluwole</i>	Education and Emerging Practice 1. Access to Education in Sierra Leone: Lessons for a Disability Inclusive Education Post-2015 Agenda – <i>Donald Njelesani</i> 2. A framework for clinical communication skills training in undergraduate health care students - <i>Elizabeth Cornelia Janse van Vuuren</i>

	<p>2. The Construct Validation of the Maleka Stroke Community Reintegration Measure (M-SCRM) - <i>Morake Douglas MALEKA</i></p> <p>3. Barriers To Reintegration Experienced By Stroke Clients Post Discharge From A Rehabilitation Center In Malawi - <i>Anthea Joy Rhoda, George Chimatiro</i></p> <p>4. Post-Stroke Depression at the University of Nigeria Teaching Hospital Ituku/Ozalla: Importance of Early Physiotherapy and Psychiatry Intervention in Stroke Management - <i>Sam Chidi Ibeneme, Akachukwu Oibileke Nwosu, Georgian Chiaka Ibeneme, Canice Anyachukwu, Muideen Bakare</i></p> <p>5. The effect of a workplace intervention programme on return to work after stroke - <i>Mokgobadibe Veronica Ntsiea, Heleen van Aswegen, Sue Lord, Steve Olorunju</i></p> <p>6. The Process and outcome of In-Patient Rehabilitation: The Case Of Three African Countries - <i>Anthea Joy Rhoda, Simon Azaria, Gerard Urimubenshi, Natalie Cunningha</i></p>	<p><i>Awotidebe, Ibidun Alonge</i></p> <p>2. Menopausal women with chronic conditions: influence of psychosocial factors on exercise and physical activity level - <i>Omoyemi Olubunmi Ogwumike, Olusola Dorcas Olasore, Ade Fatai Adeniyi</i></p> <p>Paediatrics</p> <p>3. Experiences of mothers of children with neural tube defects with accessing health care services - <i>Micah Mutuna Simpamba, Prof. Patricia Struthers</i></p> <p>Geriatrics</p> <p>4. Multi-Purpose Activities in the Elderly - Considering Ergotherapy Approaches -<i>Hulya Yucel</i></p> <p>General Paper</p> <p>5. A peer-led approach to promoting health education related to risk factors for NCDs in schools: views of the peers - <i>Jose M Frantz</i></p>	<p>Evidence-Based Practice</p> <p>3. Accessibility and use of web-based Evidence-Based Practice resources among Physical Therapists - <i>Olaide Sangoseni</i></p> <p>4. Culture on Physiotherapy and social justice in management of Non Communicable Diseases - <i>Ushotanefe Useh</i></p> <p>Sports Physiotherapy and Therapeutic Exercise</p> <p>5. Pattern of injuries among Ghanaian basketball Players In Accra - <i>Frederick Setordzor Davor</i></p> <p>6. The effect of contract-relax-agonist-contract (CRAC) stretch of hamstrings on range and sprint and agility performance in moderately active males: A randomised control trial - <i>Theresa Burgess, Jennifer Jelsma, Timothy Vadachalam</i></p>
18.30 for 19.00	Congress gala dinner - (separate program) <i>By registration and/or invitation only (tickets available at registration; Cash bar available)</i>		
Thursday 22 May: CONGRESS Day 2			
7.00 – 8:00	Congress Day Registration		
8.00 – 8.10	Opening And House Keeping		
8.10-8.30	SPONSOR SLOT		
08.30 – 11.00	<p>PLENARY SESSION: The NCD challenge; Chair – Jonathan Quartey (WCPT Africa Vice Chair)</p> <p>Participants: Keynote Speaker: Prof Aimee Stewart – Physiotherapy Research in NCD management Keynote Speaker: Dr Peter Mwaba – Physician Specialist in NCDs Invited speaker: Dr DJ Mothabeng - Disability and NCD</p>		

	Invited Speaker: Dr Nsakashalo - Government's strategies on the management of NCD's and Human Resources Invited speaker: Dr Lishimbi - (Oncologist) Cancer and Physiotherapy Professor Ushotanefe Useh: Culture on Physiotherapy and social justice in management of Non Communicable Diseases DISCUSSION		
11.00 – 11.25	TEA/COFFEE		
11.30 – 13.30	Parallel Free Paper Sessions (15 min presentations + 5 min questions)		
	SESSION 4: Chair - Ms Loveness Nkhata Primary Health Care and Public Health 1. Epidemiologic Features Of Amputation In Kano State, North –West, Nigeria: A Five Year Retrospective Study - <i>Bashir Kaka, Omoyemi O Ogwumike, Omoyemi O Ogwumike, Idowu Opeyemi Ayodiipo, Idowu Opeyemi Ayodiipo, Atijosan Olagoke Jesuyemi, Atijosan Olagoke Jesuyemi, Abdulkadir Gwarzo Husaini, Abdulkadir Gwarzo Husaini</i> 2. The Impact of accessibility of public buildings and spaces on participation by persons with mobility limitations with Zambia - <i>Martha Banda-Chalwe, Jennifer C. Nitz, D de Jonge</i> 3. Patient Satisfaction with Rehabilitation Services at PHC Level - <i>Nondwe B Mlenzana, Jose M Frantz</i> 4. Knowledge, attitude and practice of physiotherapists towards health promotion in Ghana - <i>Hosea Boakye, Jonathan quartey</i> 5. Physical activity among community dwelling individuals with diabetes mellitus: an exploration of challenges - <i>Tania Steyl, Joliana Selma Phillips</i>	SESSION 5: Chair - Mrs Florence Salati Cardiopulmonary and Cardiovascular 1. Self-perception and behaviour in relation to the risk of IHD in a cohort of South African individuals living with HIV - <i>Ronel Roos, Hellen Myezwa, Helena Van Aswegen</i> 2. Were patients who died different from those who survived 3 months after lower limb amputation? <i>Lonwabo Lungile Godlwana, Aimee Stewart, Eustasius Musenge</i> 3. Comparison of the effects of aerobic and stretching exercises on selected cardiopulmonary parameters in female Breast cancer survivors - <i>Happiness Anulika Aweto, Sunday Rufus, Akinwumi Akinbo, Olajide Ayinla Olawale</i> 4. Cardiovascular Risk Profile of Post-Menopausal Women in a Semi-Urban Community in Nigeria - <i>Taofeek Oluwale Awotidebe, Rufus A Adedoyin, Ifedayo L Olola, Chidozie E Mbada, Odunayo T Akinola</i> 5. Knowledge of Nigerian female undergraduates on obesity as a risk factor for cardiovascular diseases in women - <i>Taofeek Oluwale Awotidebe, Rufus A Adedoyin, Busola A Fatoogun, Chidozie E Mbada, Odunayo T Akinola</i>	SESSION 6: Chair – Anthea Joy Rhoda Neurology 1. Socio-demographic and Personality Profile as Correlates of Motor Function During Early Stage Rehabilitation of Individuals with Spinal Cord Injury - <i>Talhatu Kolapo Hamzat, Bolanle Morenike S. Tinubu</i> 2. Clinical predictors of functional recovery at six month post stroke - <i>Caleb Ademola Gbiri, Aderonke O Akinpelu, Adesola Ogunniyi, Werdie C.W.V. Staden, Abiodun E Akinwuntan</i> 3. Acute changes in upper limb problems post stroke - <i>Nicolette Comley-White, Witness Mudzi</i> 4. The effect of electrical stimulation of the abdominal muscles on function in patients who have had a stroke: A randomised control trial - <i>Jennifer Margaret Jelsma, Crystal Moosajie</i> 5. Psycho-Social Determinants of Functional Independence in Post-Stroke Individuals <i>Caleb Ademola Gbiri, Aderonke O Akinpelu, Adesola Ogunniyi, Werdie C.W.V Staden</i> General Paper 6. Relationship between performance-oriented

			mobility assessment and ankle range of motion in the elderly - <i>Joseph Onuwa Umunnah, Martha Uche Chukwuemeka, Chris Udoka Okafor, Prosper Uche Okonkwo</i>
13.30 – 14.25	LUNCH - Exhibition and Posters Coordinator – Billiat Chongo <ul style="list-style-type: none"> • A Quantitative study to determine involvement of physiotherapy practitioners in physical activities at three major Hospitals in Lusaka - Agness Chalwa Malu • Nigerian Undergraduates' Knowledge, Attitude and Handling Practice of Accident Casualties - Chidozie Emmanuel Mbada, Ayokunle Oluwatosin Gbadamosi, Elkanah Ayodele Orimolade, Ajibola Babatunde Oladiran, Taofeek Oluwole Awotidebe, Tolulope Gideon Kehinde • Non-specific chronic low back pain and self-management in rural Nigeria: A qualitative exploration of beliefs, experiences and self-management practices - Chinonso Nwamaka Igwesi-Chidobe, Isaac Sorinola, Emma Godfrey • Continuum of Care in HIV: Navigating HIV as a Chronic and Episodic Disease - Hellen Myezwa • Prevalence of hypertension and stroke at Levy Mwanawasa General Hospital- physiotherapy 2012 and Action taken - Mary Sakala Mumba • Health-related quality of life of Nigerian stroke survivors during recovery phase - Ashiru Hamza Mohammad, Nabilla Alsadat Abdul-Mohsein, Loh Siew Yim • Reduction in abdominal adiposity resulted in changes in cardiovascular disease risk classification and quality of life following a 12-week exercise programme - Ayodele Akintunde Akinremi, Ayodele Akintunde Akinremi, Arinola Olasunmbo Sanya, Arinola A Sanusi • Depression, pain and physical function in patients with osteoarthritis of the knee: implications for inter-professional care - Adesola Christiana Odole, Michael Ogunlana, Babatunde Adegoke, Faith Okenyi, Ushotanefe Useh • Health-seeking behaviour adopted by Nigerian stroke survivors - Caleb Ademola Gbiri, Olajide O Olawale, Nwabuogochukwu Justinah Obi, Werdie C.W. Staden 		

14.30 – 17.30	In-congress workshops (fee included in congress registration) <i>Limited spaces - delegates to make choices at latest by Day 1 of Congress)</i>	
	Exercise prescription Professor Marilyn Moffat Chair – Dr Martha Banda-Chalwe	Writing skills Professor Sekelani Banda Chair – Peter D C Phiri
	PARTY NIGHT – All delegates invited	
18.30 for 19.00		

Friday 23 May: CONGRESS Day 3			
7.00 – 8:00	Congress Day Registration		
8.00 – 08.15	Opening And House Keeping		
08.15 – 10.20	Parallel Free Paper Sessions (15 min presentations + 5 min questions)		
	SESSION 7: Chair – Mr. Hastings Shula	SESSION 8: Chair – Mrs. Naomi Silavwe	SESSION 9: Chair – Mr. Raphael Owako
	Clinical Research 1. Satisfaction of Stroke Survivors with Physiotherapy care in Ibadan, Nigeria - <i>Olubukola Adebisi Olaleye, Marvellous Adetayo Akinrinsade</i> 2. Predicting the Critical Point for the onset of Diabetic Foot Ulcer using the Modified Velocity Field Diagram - <i>Sam Chidi Ibeneme</i> 3. Joint Predictability of Physical Activity and Bodyweight on Health-Related Quality of Life among Nigerian Type 2 Diabetes - <i>Olufemi Oyeleye Oyewole, Kolawole Sunday Oritogun, Akolade Olukorede Idowu, Olatunde Odusan</i> 4. Effects of a 6-week Telephone based Physiotherapy Intervention on Pain Intensity and Physical Function of Patients with Knee Osteoarthritis - <i>Adesola Odole, Oluwatobi</i>	Orthopaedic and Manual Therapy 1. Reliability of an adaptation of Linear Excursion Measurement device - <i>Joseph Onuwa Umunnah, Violet Akwuakananwa Nwaefulu, Chris Udoka Okafor, Yvonne Ebere Ihegiu</i> 2. Associations between physical work load, psychosocial work factors and musculoskeletal symptoms among a sample of Dentists In Nigeria - <i>Akinfeleye, A.M., Ogunnowo B.E</i> 3. Influence of Intensity and Duration of Pain on Body Composition in Patients with Low Back Pain - <i>Abiola Oladele Ogundele</i> 4. Musculoskeletal symptoms among postmenopausal women in Nigeria: association with overall and central abdominal obesity - <i>Omoyemi Olubunmi</i>	Outcome Measures 1. The development and [sychometric testing of a new functional measure for children with spina bifida in Zambia - <i>Margaret Mutale Mweshi</i> Primary Health Care and Public Health 2. Development and reliability testing of the Participation-Based Environment Accessibility Assessment Tool in Zambia - <i>Martha Banda-Chalwe, Jennifer C. Nitz, D de Jonge</i> Orthopaedic and Manual Therapy 3. Effect of stabilization exercise on fear avoidance belief of patients with non-specific chronic low back pain – <i>Ashiyat Kehinde Akodu, Sunday Rufus Akinbo, Daniel Oluwafemi Odebiyi, Suleiman Olaiwola Giwa</i> 4. The effect of spinal mobilisations on

	<p><i>Ojo</i></p> <p>5. Pain Assessment as an Outcome Measure for Physiotherapy Intervention in Children with Cerebral Palsy - <i>Ajediran I. Bello, Naa Abokailey Mensah</i></p> <p>6. Risk factors for Non-Communicable Diseases in wheelchair-dependent people with Spinal Cord Injury living in the city of Tshwane: A cross-sectional study - <i>Izaan de Jager, Joyce Mothabeng, Piet J Becker</i></p>	<p><i>Ogwumike, Ade Fatai Adeniyi, Oluwakemi Oluwayemisi Orogbemi</i></p> <p>5. Prevalence of Pectoral Girdle Myalgia in Nigerian Women - <i>Daniel Oluwafemi Odebiyi, Happiness A Aweto, Olumide A Gbadebo, Ayodeji A Oluwale, Ayoola I Aiyegbusi, Matthew OB Olaogun</i></p> <p>Health Care Administration and Policy</p> <p>6. Perception of Direct Access and Patients' Self-Referral among Nigerian Physical Therapists - <i>Chidozie Emmanuel Mbada, Kayode David Ojetola, Rufus Adesoji Adedoyin, Abiola Oladele Ogundele, Olubusola Esther Johnson, Taofeek Oluwale Awotidebe, Teslim Ayodele Onigbinde</i></p>	<p>neuropathic pain in people living with spinal cord injuries - <i>Ilse du Plessis</i></p> <p>Sports Physiotherapy and Therapeutic Exercise</p> <p>5. Knowledge and Perception of the role of physiotherapy among members of hockey teams in Accra - <i>Nana Ama Siba Noamesi, Jonathan Quartey</i></p> <p>Health Care Administration and Policy</p> <p>6. Physiotherapists' and Patients' Perception of Factors Influencing Treatment Non-Adherence in Physiotherapy - <i>Chidozie Emmanuel Mbada, Akinola Akinboyenle Samson, Taofeek Oluwale Awotidebe, Abiola Oladele Ogundele</i></p>
10.20 – 10.55	TEA/COFFEE		
11.00 – 13.00	<p>PANEL DISCUSSION: NCDs in Zambia and way forward Moderators: Dr Esther M Nkandu / Mr Peter DC Phiri</p> <p><u>Panelists / discussants:</u> Invited Speaker : Mr. George Chigali - Public health challenge of NCD Dr. Mudenda - Stroke Survivor Mrs. Emy Zawe Sikazwe – Cancer Survivor Dr. Father Jackson Katete – Community member Dr. Nsakashalo – Ministry of Community Development Mother and Child Health Dr. Elizabeth Chizema – Ministry of Health Dr. Martha Banda-Chalwe – Researcher/Lecturer University of Zambia</p>		
13.00 – 13.55	LUNCH BREAK		
14.00 – 16.00	CLOSING PLENARY: Chair - Jean Gasherebuka (WCPT Africa Chairman)		
	<p>Panel discussion: Physiotherapy Research, Teaching and Practice in NCD - An African perspective (5 panelists – The five panelists will be from five countries in WCPT Africa)</p> <p>Congress awards Announcement</p> <ul style="list-style-type: none"> • New WCPT Africa executive committee 2014 - 2016 • Venue for WCPT Africa congress 2016 		

***10TH WORLD
CONFEDERATION FOR
PHYSICAL THERAPY
AFRICAN REGION
CONGRESS***

Abstracts

CHAIRPERSON OF THE SCIENTIFIC COMMITTEE

Dr. Martha Banda-Chalwe (PhD)

Dr. Martha Banda-Chalwe is a Physiotherapist and a Disability and Rehabilitation Scientist. She is Head, Department of Physiotherapy at the University of Zambia (UNZA), School of Medicine since September 2013. As a Physiotherapist she has presided over the affairs of the Zambia Society of Physiotherapy (ZSP) as President, Secretary General and other executive positions. As President, ZSP achieved the commencement of a BSc Physiotherapy program at the University of Zambia in 2001. She was Secretary General for the Africa Region of the World Confederation of Physical Therapy 2004-2006.



As a Disability and Rehabilitation Scientist, Dr. Banda has worked with people with disabilities for over 30 years. She has contributed in the training of physiotherapists in disability and rehabilitation, advancing the rights for persons with disabilities through research and consultancy, and currently with emphasis on the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD) and the International Classification of Functioning Disability and Health (ICF). Dr. Banda is a member of the Organization for Social science Research in Eastern and Southern Africa (OSSREA) and the International Society for the Study of Behavioral Development (ISSBD).

Dr. Banda is a member of the Dean's Advisory Board and the School of Medicine Board of Studies Committee. She is Chair of the School Disciplinary Committee. Outside University, she is a member of the Zambia Red Cross Society, Health Sub-Committee and the Institute of Directors, Zambia.

Welcome to the Congress!

GENERAL PAPERS

A Peer-Led Approach to Promoting Health Education Related to Risk Factors for NCDS in Schools: Views of the Peers

Jose M Frantz

Background: Health education and health promotion is a key pillar in the management strategy of physiotherapists. However, due to limited resources and time constraints this is commonly not the first choice of management of a physiotherapist. In order to assist the aspects of health education and health promotion, peer led health education strategies have been recognized as an effective method of providing health education in schools. Although many health education programs for adolescents have used peer educators to deliver information, few researchers have evaluated the effects of participation in educational activities on the peer educators themselves.

Purpose: Thus the aim of this paper was to report on the peer educators experience in implementing a health education program focusing on risk factors for non-communicable diseases in South African schools as well as their experience with interacting with the students.

Methodology: This study employed a qualitative approach to explore the views of peer educators. Peer educators from identified schools in the Western Cape, South Africa were identified and purposively selected to participate in this study. Post matriculation learners from identified schools were identified and approached to participate in the study. Data for the study was obtained from informal discussions with peer educators, educator review forms and in-depth interviews.

Analysis: Information from the interviews was transcribed and thematic interpretive analysis was used. Ethical approval was obtained from the UWC and permission to conduct the study was obtained from the Department of Education. Three main themes emerged (1) challenges in implementing the health education program, (2) Personal growth of peer educators and (3) experience of interacting with other young people. Each theme contained a number of categories.

Results: The findings suggested that although the peer educator enjoyed the process and experience, there were several personal and logistical challenges with implementation of such programs in schools. However, despite the challenges the value of peer educators and the experience gained in sharing knowledge on risk factors for NCD cannot be undermined. This is significant for physiotherapy practice where the limited number of physiotherapists in countries, does not allow the profession to reach

the masses and through training peers in the school system we can get the message of prevention and health promotion across effectively.

Relationship between Performance-Oriented Mobility Assessment and Ankle Range of Motion in the Elderly

Joseph Onuwa Umunnah, Martha Uche Chukwuemeka, Chris Udoka Okafor, Prosper Uche Okonkwo

Background: Balance and function have been demonstrated to be closely related, while ageing has been established to have deleterious influence on balance. This is important for consideration by physiotherapists who are often involved in the assessment and management of individuals who are unable to maintain adequate stability for goal-directed motor task ability.

Objective: The study investigated the relationship between balance using performance-oriented mobility assessment tool and ankle range of motion (ROM) of the dominant side of both young and elderly persons in south-eastern Nigeria.

Methods: The Ex-post facto study involved 87 elderly individuals selected using a purposive sampling technique. The participants' bio-data was recorded, while balance was assessed using Tinetti Performance Oriented Mobility Assessment (POMA-T). Balance and gait speed were measured using POMA (POMA-B for balance and POMA-G for gait), while all active ankle movements of the dominant side of the body were measured using a double-armed universal goniometre. Data was analysed descriptively (using means and SD) and inferentially (using Pearson Product Moment Correlation [PCC] to determine relationships). Alpha level was set at 0.05.

Results: Mean age of participants was found to be 70.33 ± 4.74 years (44 males, 43 females). Mean POMA- B, POMA-G, and POMA-T were 15.19 ± 1.14 , 11.33 ± 1.15 and 26.35 ± 2.48 respectively. Mean ankle ROM were $21.70 \pm 4.90^\circ$ (plantarflexion), $16.18 \pm 3.77^\circ$ (dorsiflexion), $26.00 \pm 7.23^\circ$ (inversion) and $11.98 \pm 3.87^\circ$ (eversion). No significant correlation ($p > 0.05$) was found between POMA (POMA-G and POMA-B) and each of ankle dorsiflexion, plantarflexion, eversion, and inversion. POMA-B significantly correlated with normal gait speed ($r=0.218$, $p=0.043$)

Conclusions: The results suggest that there is no relationship between mobility and ankle range of motion in the elderly. Also balance and gait speed may be given more emphasis in routine clinical care of the elderly. It was recommended that balance assessment (static and dynamic) in the elderly using the POMA should be encouraged.

Key words: *performance oriented mobility assessment, balance, range of motion*

The Impact of Physiotherapy in Palliative Care in a Nigerian Tertiary Hospital

Nnenna Nina Chigbo, Chris Chim Amah, Tonia Onyeka, Martins Nweke, Emmanuel Nwigwe, Chris Onugha, Stanley Idu

Purpose: This paper presents a systematic review of literature demonstrating the role of physiotherapy in the palliative management of some life limiting, non-communicable diseases like cancer, HIV, chronic bronchitis and diabetes especially as it concerns control of symptoms and prevention of disability. In addition we present the results of a case-series designed to ascertain the impact of 6 weeks physiotherapy interventions on the palliation of distressing symptoms and overall quality of life of palliative care patients managed in a Nigerian tertiary hospital.

Relevance: The study results will strengthen existing evidence for palliative physiotherapy and influence policies to inculcate physiotherapy early in palliation. Evidence of the impact of physiotherapy in palliative care may lead to consistent, early referral of patients for palliative physiotherapy. This palliation of symptoms could better the health outcome of patients.

Participants/Subjects: Seven clients consented to this study (four males and three females); two living with HIV/AIDS and five living with cancer. They were referred from the hospital's palliative care team, general surgery department and the HIV clinic.

Methods: A systematic review on the subject matter was carried out followed by a case series conducted in a Nigerian tertiary hospital. A convenient sampling technique was adopted and extensive search conducted in PubMed Central, Google scholar and Cochrane Collaboration databases. There was no delimitation to time of publication but case reports and non English language studies were excluded. Evidence was graded using the Scottish Intercollegiate Guidelines Network 50 (SIGN 50) checklist.

Patients in this tertiary hospital received physiotherapy twice weekly for 6 weeks. The Brief Fatigue Inventory and Peak Expiratory Flow Rate (PEFR) were used to assess effect of aerobic exercises on fatigue and lung function. APCA POS and SF- 36 questionnaires were used to assess effect of physiotherapy on physical functioning, psychology and symptom control. Pain was assessed on VAS score. Further information was accessed from patient case notes as secondary data source.

Analysis: Data extracted was analyzed using simple descriptive statistics like mean, percentages, bar chart and cross-tabulations.

Results: The systematic review showed role of physiotherapy in pain, fatigue and anxiety palliation, reduction of lymphoedema, improvement of range of motion, muscle bulk, aerobic fitness and overall quality of life. The physiotherapy interventions used

include massage therapy, electro-acupuncture, aerobic exercise, resistive exercise, education, complex decongestive therapy, controlled compression therapy, manual lymphatic therapy, breathing exercise, yoga and aerobics with average impact being significant($p<0.05$) respectively. The result of the 7 case series (Cancer: 5, HIV: 2) is consistent with the systematic review by showing averaged positive percentage difference on Brief Fatigue Inventory(BFI) score of 33.3%, VAS (37.5%) and PEFR (47.3%). Average percentage change in POS and SF-36 scores was 14% and 56.8% respectively. The physiotherapy interventions exploited include aerobics, resistive exercise, manual lymphatic therapy, faradism, incentive spirometry and education.

Conclusion: All seven patients showed a trend towards improvement but a more robust, randomized controlled trial in palliative care physiotherapy is needed to reduce bias on the outcomes.

Implications: It can be inferred that physiotherapy interventions may alleviate distressing symptoms making medical treatment more tolerable.

Keywords: *physiotherapy, palliative care, impact*

Funding: The authors declare no sources of funding for this work.

Ethical approval: Approval was obtained from the Health Research and Ethics Committee of the University of Nigeria Teaching Hospital, Ituku-Ozalla, Enugu.

GERIATRICS

Multi-Purpose Activities in the Elderly – Considering Ergotherapy Approaches

Hulya Yucel

Purpose: Interests and skills in recreational activities are reduced with aging. This may be because of changes in many body functions. Not only aging, but also an un-well organized environment limits the functions of the elderly. Many have concern about participating in activity programs; therefore, activities in the elderly are more passive and home based. Not having attended in an activity program brings many problems. In this presentation, multi-purpose activities which might be given to the elderly and their importance will be highlighted. This study was planned with the aim of showing the effectiveness of multi-purpose activity training in the elderly whom at home and in rest house.

Relevance: Ergotherapy and physiotherapy complement each other. Ergotherapy approaches promote active aging through participation in activities prescribed according to needs. Ergotherapy in the elderly mainly focuses on maintaining activities of daily living successfully, restoring decreased abilities, improving quality of life, continuity on social habits in a society, and providing psychosocial support. Scientists in the 21st century specialized in therapeutic recreational activities, work to find significant activities for the elderly. These activities help them adapt themselves to changes in conditions, encourage them to express themselves, enable physical, sensory-motor, emotional, and cognitive well-being. The implementation of activities in the elderly is also essential to increase psychological well-being and improve cognitive skills. Further investigation about multi-purpose activities to inhibit the development of conditions such as depression and dementia is necessary.

Participants/Subjects: 34 elderly staying in a rest house and 33 elderly living at home aged 65 years and above participated in the study.

Methods: Demographic features were recorded. Before and after activity training, physical performance test, Jebsen hand function test, short portative mental status questionnaire, Yesavage's 30 point geriatric depression scale, word fluency test, and short form 36 health surveys were performed. Activities such as handicrafts, locomotor activities, and cognitive activities were performed two days a week for twelve weeks, each section lasted forty five minutes.

Analysis: Effectiveness of activities in an institute and at home was compared by two paired t test before and after the program.

Results: After activities, the decrease of only depression was seen in the rest house group ($p<0.05$).

Conclusion: Although the elderly who stayed in a rest house participated in activities which were their own choice, a significant difference was not seen in their quality of life. Our study showed that amplifying activity variety, making the elderly desire the activity and creating possibilities for them to participate into activities regularly and continuously are topics which might be studied to increase their quality of life. A good activity planning and also national campaigns are needed in order to change perceptions and encourage the elderly to participate in activity programmes.

Implications: The results indicate the need of considering other factors besides activity training to affect quality of life of elderly who stay in an institute. The cultural values, satisfaction, motivation, interests and roles in the society of the elderly are taken into account.

Key words: *aged, geriatrics, multi-purpose activities, activity training, depression, quality of life*

STROKE AND STROKE REHABILITATION

Risk Factors Associated with Post-Stroke Depression in Patients Attending Physiotherapy Clinic at the University of Nigeria Teaching Hospital Ituku/Ozalla

Sam Chidi Ibeneme, Akachukwu Obileke Nwosu, Georgian Chiaka Ibeneme, muideem Bakare

Purpose: The need to identify risk factors for post-stroke depression was examined in this study.

Relevance: Identifying the risk factors for post-stroke depression (PSD) helps to stratify the patients according to risk level and target appropriate intervention to enhance recovery.

Participants/Subjects: Fifty patients (22 females and 28 males) at the out-patient unit of Physiotherapy Department, University of Nigeria Teaching Hospital, Enugu with cerebrovascular accident (CVA) who gave their informed consent were randomly selected from the patients that had current appointments, and met the selection criteria,. Their age range and mean age were 26 – 66 years, and 54.76 ± 8.79 years, respectively

Method: This study utilized *ex-post facto* research design. Patients were assessed with Becks Depression Inventory (BDI), the Mini Mental Status Examination tool (for cognition), and Modified Motor Assessment Scale (for motor function). The tests were performed independently by the patients except otherwise stated, and scored on a scale of 0-6. The psychiatrist would request them to withdraw from the test when they become emotionally labile. Data were analyzed using Z-test for proportional significance and Chi-square test to determine relationship between variables. The odds ratio was calculated as the natural parameter in the conditional likelihood of the two-group, binomial-response design with alpha set at 0.05.

Results: Analysis of the results identified age as a risk factor for depression in stroke patients ($\chi^2 = 4.92$, $df = 1$, $p = 0.026548$, $\phi = +0.31$, $\phi^2 = 0.1$), but little or no association was established between PSD and other socio-demographic or anatomic/clinical variables ($p > 0.05$).

Conclusions: The odds of responding to stroke with depression are higher in young adults than any other age group.

Implications: The young adults should be targeted at the onset of stroke, as the age group that is most vulnerable or at the greatest risk for PSD which can impede rehabilitation

The Construct Validation of the Maleka Stroke Community Reintegration Measure (M-SCRIM)

Maleka, D., Stewart, A., Hale, L., Becker P

Purpose: The Maleka Stroke Community Reintegration Measure (MSCRIM) is a new measure to assess community reintegration for black patients with stroke, who are living in low socioeconomic areas of South Africa. The MSCRIM has two versions, namely, rural and urban. The objective of this study was to establish the construct validity of the MSCRIM, by comparing it with an existing tool of community reintegration, the Subjective Index of Physical and Social Outcome (SIPSO).

Relevance: The use of outcome measures in health care is to enable clinical quality management, which forms part of the quality assurance process in patient management.

Design: A quantitative, cross sectional study design was used.

Setting and participants: The study took place in both a rural (Limpopo province, South Africa) (n=40) and urban (Gauteng province, South Africa) (n=40) setting. The sample comprised 80 participants who had sustained a stroke, were aged 18 years and above and were members of the community in which they lived pre-stroke, and had been back living in their community for six to twelve months since their stroke.

Method: Participants were recruited from the stroke register by the on-site physiotherapists. Participants' demographic data were captured using a standardised form. Participants were given the option to be interviewed with the translated (South Sotho, Xitsonga, TshiVhenda, Zulu or English version) of the M-SCRIM and the SIPSO. Although the SIPSO is usually self-administered, in this study it was interview-administered. In each setting, one trained rater administered each questionnaire to all participants.

Analysis: The Pearson product moment correlation coefficient (r) was used to assess correlation between the total scores of the M-SCRIM and the SIPSO. R-values of 0 -0.4 were considered to be a poor correlation, 0.4 -0.6 moderate and 0.6 -1 a good-excellent correlation. The STATA (version 10) package was used to analyse data.

Results: The Pearson product moment correlation coefficient (r) between the total scores of the MSCRIM and the SIPSO was $r = 0.95$; $p = 0.001$ (rural version) and $r = 0.88$; $p = 0.0001$ (urban version).

Conclusion: The very high, positive correlation indicates that the two outcome measures were measuring a similar construct. However, MSCRIM (both versions)

contains items that are contextually specific to black patients with a stroke living in low socioeconomic areas in South Africa.

Implications: The M-SCRIM has sound construct validity, should therefore be the outcome measure of choice for stroke survivors living in low socioeconomic areas, such as those found in South Africa. The choice is due the fact that the M-SCRIM contains context specific items that are applicable to a rural and urban black South African setting.

Keywords: *stroke, construct validity, community reintegration, MSCRIM, SIPSO*

Ethical considerations: Ethical clearance was sought and obtained from the University of the Witwatersrand (M070816) prior to commencement of the study as well as from the respective health authorities and facilities in the two provinces. Consent was sought and obtained from all participants.

Funding Source and Acknowledgement: Funding for this research was provided by the University of the Witwatersrand and the South African Society of Physiotherapy (SASP). The authors would like to acknowledge the following people for their various contributions to this study: The research assistants in Limpopo and Gauteng provinces; the hospital, clinic managers and heads of physiotherapy departments in Gauteng and Limpopo provinces for permission to do the study in their clinics; the participants with stroke and their caregivers in both Limpopo and Gauteng provinces, SA.

Barriers to Reintegration Experienced By Stroke Clients Post Discharge from a Rehabilitation Center in Malawi

Anthea Joy Rhoda, George Chimatiro

Purpose: The aim of the study was to explore the barriers to reintegration experienced by stroke patients post discharge from a rehabilitation center in Malawi.

Relevance: Identifying barriers to reintegration can inform the development of appropriate rehabilitation interventions for stroke patients in African Countries

Participants/Subjects: Eight participants were purposively selected to participate in the study.

Methods: A qualitative study using in-depth interviews was employed. An interview guide was used during the in-depth interviews and ethical clearance was obtained from the senate ethics committee of the University of the Western Cape and the necessary permission was obtained from authorities in Malawi.

Analysis: Qualitative content analysis was used to identify emerging themes

Results: The findings of this study highlighted that impairments such as depression, anxiety and physical weakness were barriers to reintegration at the individual level, while attitudes of others, poor terrain, long distances to places of interest, and inaccessible structures were barriers experienced on the environmental level.

Conclusions: Barriers to reintegration include factors relating to the impairments as experienced by the individuals post stroke as well as factors in the environment with in which the individual engaged.

Implications: Factors at the level of the individual and the environment should be considered when facilitating reintegration of stroke patients into the community.

Keywords: *stroke, barriers to reintegration, community*

Post-Stroke Depression at the University Of Nigeria Teaching Hospital Ituku/Ozalla: Importance of Early Physiotherapy and Psychiatry Intervention in Stroke Management

Sam Chidi Ibeneme, Akachukwu Obileke Nwosu, Georgian Chiaka Ibeneme, Canice Anyachukwu, Muideen Bakare

Purpose: - The need to routinely screen stroke survivors for post-stroke depression (PSD) was examined in this study.

Relevance: Most clinicians hardly screen stroke patients for post-stroke depression (PSD) which impedes rehabilitation when it is undetected and untreated.

Participants/Subjects: Fifty patients (22 females and 28 males) at the out-patient unit of Physiotherapy Department, University of Nigeria Teaching Hospital, Enugu with cerebrovascular accident (CVA) who gave their informed consent were randomly selected from the patients that had current appointments, and met the selection criteria,. Their age range and mean age were 26 – 66 years, and 54.76 ± 8.79 years, respectively

Method: - This study utilized *ex-post facto* research design. Patients were assessed with Becks Depression Inventory (BDI), the Mini Mental Status Examination tool (for cognition), and Modified Motor Assessment Scale (for motor function). The tests were performed independently by the patients except otherwise stated, and scored on a scale of 0-6. The psychiatrist would request them to withdraw from the test when they become emotionally labile. Data were analyzed using Z-test for proportional significance and Chi-square test to determine relationship between variables, with alpha set at 0.05.

Results: - Analysis of the data show that PSD was present in 42% of the patients, and was significantly dependent on duration of stroke ($\chi^2 = 21.680$, $df = 6$, $p = 0.001$), but not dependent on other socio-demographic and anatomic/clinical variables ($p > 0.05$).

Conclusions: PSD is common in stroke survivors, and is dependent on duration of stroke

Implications: The results suggest the need to make screening for PSD a standard routine for stroke survivors. It further highlights the importance of instituting early psychiatry intervention before depression sets in and impedes rehabilitation.

Keywords: *stroke, screening, post-stroke depression*

The Effect of a Workplace Intervention Programme on Return to Work after Stroke

Mokgobadibe Veronica Ntsiea, Heleen van Aswegen, Sue Lord, Steve Olorunju

Background: Stroke impacts on a survivor's ability to participate in community activities such as returning to work and affects people who are still within the working age. The incidence of stroke in people younger than 65 years has increased with almost 5% occurring in those younger than 45 years of age.

Purpose: To establish the effect of a workplace intervention programme on the rate of RTW of previously employed stroke survivors.

Relevance: The workplace intervention programme can be included in stroke rehabilitation and this may enable people with stroke to contribute their skills and abilities to the economy and society. The cost of claims on public social security and occupational benefit schemes can be reduced if employees with stroke are retained at work and this will also help to improve the stroke survivors' quality of life.

Participants: Eighty stroke survivors (40 in intervention and 40 in control group) between the ages of 18 and 60 years who were employed at the time of having stroke. Participants had a Barthel Index score of at least 60% and stroke for less than eight weeks at the time of baseline assessment.

Methods: A randomized controlled trial with a three and six month follow-up. The workplace intervention programme was tailored according to the functional ability and workplace challenges of each stroke survivor and included work ability assessment; vocational counseling and coaching; adaptation of the work environment; and advice on strategies to compensate for functional limitations. The control group received usual stroke care which took into consideration the stroke survivor's job requirements, but without work visits and workplace intervention. The primary outcome was return to work (RTW) rate and secondary outcomes were functional level (activities of daily living, mobility and basic cognitive function) and perceived quality of life. The study setting was an urban area within a developing country.

Analysis: Descriptive summary statistics were used to compare baseline characteristics for both groups. For continuous variables that were normally distributed a two sample independent t-test was used. For non-normal distributions a Mann-Whitney U-test was used. Fisher's exact test was used to test the association between categorical variables for variables which had less than five observations per category; otherwise the Chi-squared test was used. Rate of RTW was assessed by comparing the percentage of participants who returned to work with those who did not, using a two sample independent t test of proportions. All statistical analyses were performed according to the intention to treat analysis. Per protocol analysis was used to establish if any protocol deviations had caused bias. Missing data was not imputed.

Results: The average age of the stroke survivors was 45 years (SD: 8.7); average stroke duration was 4.6 weeks (SD: 1.8); 39 (49%) had left hemiplegia and 41 (51%) had right hemiplegia. At six months follow-up: there were 35 stroke survivors within the intervention group and 37 within the control group. Stroke survivors in the intervention group were 5.2 times more likely to RTW than those in the control group; and for every unit increase in the activities of daily living and cognitive assessment scores, the likelihood of RTW increased by 1.7 and 1.3 respectively; those who returned to work had better quality of life than those who did not RTW ($p = 0.05$; Confidence Interval: -19.8 – 0.3).

Conclusion: Overall, these results suggest the need to direct resources towards increasing work place intervention strategies after stroke.

The Process and Outcome of In-Patient Rehabilitation: The Case of Three African Countries

Anthea Joy Rhoda, Simon Azaria, Gerard Urimubenshi, Natalie Cunningha

Purpose: The purpose of the study was to determine the process and outcome of rehabilitation of stroke patients in three African Countries.

Relevance: The results of the study could ensure that physiotherapy interventions are appropriately addressing the outcomes of stroke patients in Africa.

Participants/Subjects: Information relating to the process of care was collected from a conveniently selected sample of patients admitted to hospitals in the different countries. The outcome of rehabilitation was determined using a purposively selected sample.

Methods: A retrospective record review was used to collect quantitative data, while interviews were used to collect qualitative data.

Analysis: Descriptive statistics was used to analyse the qualitative data and thematic analysis for qualitative data analysis.

Results: The sample consisted of 168 South African (SA) participants; 145 Tanzanian participants (TZ) and 139 stroke Rwandese (RW) participants for the retrospective survey. The length of hospital stay ranged from 7.38 days in the SA setting to 8.2 days in the RW setting. Physiotherapy was received by 67.15% in the TZ sample; 39.6% in the RW sample and 98% of the participants in the SA sample. A significant relationship existed between LOS and number of physiotherapy sessions in all the countries. ($p < 0.05$). Limitations in the inability to walk, and a lack of participation in social activities were experienced by all participants. Environmental barriers were also experienced by all.

Conclusions: A younger stroke population is admitted to hospitals in less developed countries in Africa. Although physiotherapy is more frequently provided in some African countries the stroke patients experience similar functional challenges.

Implications: Rehabilitation for stroke patients should address environmental barriers experienced by stroke patients

Keywords: *outcomes of african stroke patients.*

Funding Source Acknowledgement: University of the Western Cape Research Grants

Health-Related Quality of Life of Nigerian Stroke Survivors during Recovery Phase

Ashiru Hamza Mohammad, Nabilla Alsadat Abdul-Mohsein, Loh Siew Yim

Background: Stroke is currently the main cause of neurological disability in Nigeria. The impact of stroke can be devastating, leaving a person with significant residual impairment of physical, psychological, and social functions. The study aimed to measure the changes that occur in different dimensions of the health-related quality of life and to identify the factors that affect those changes over time among long term survivors.

Methods: This study was conducted at three stroke referral hospitals that are dedicated to the rehabilitation and neurologic disorders in Kano, Nigeria; Aminu Kano Teaching Hospital, Murtala Mohammad Specialist Hospital and Mohammad Abdullahi Wase Specialist Hospital. Participants' recruitment began after approval was obtained from the Medical Ethics committee of the University of Malaya and the said hospitals. Patients with a diagnosis of stroke who were admitted or seen as outpatients at the neurology and physiotherapy clinics in these three hospitals between December 2010 and January 2012 were included in the study. A prospective longitudinal observation study was conducted in three hospitals of Kano state of Nigeria. The linguistic validated Hausa version of the Stroke Impact Scale, modified Rankin scale, Barthel Index and Beck Depression Inventory scales were used to measure the different dimensions of health-related quality of life. Paired samples t-test was used to calculate the amount of changes that occurs over time and the forward stepwise linear regression model was used to identify the factors that predict those changes in the physical, mental and social dimension of the health-related quality of life. Two hundred-thirty three stroke survivors participated who were followed up at 6 months after stroke. Among them, 217 stroke survivors were followed up at 1 year.

Results: The study found the significant improvement in neurological impairments and functional disability among stroke survivors during their recovery phase. It also found that involvement of family members as caregiver improves the functional status of the long term survivors.

Conclusion: The finding of this study supports drawing on existing resources including health services and rehabilitation, social relationship and support system to address individual's identity. Thus this study generates the necessity of establishment of stroke rehabilitation facilities and services at every possible level and involvement of family members in the rehab process to give the best possible health-related quality of life to the stroke survivors during their post recovery period.

Key words: *stroke, stroke survivors, health-related quality of life, rehabilitation*

EVIDENCE-BASED PRACTICE

Accessibility and Use of Web-Based Evidence-Based Practice Resources among Physical Therapists

Olaide Sangoseni

Purpose/Hypothesis: Evidence-based practice (EBP) allows the comparison of PT services and facilitates uniformity in the interpretation of PT outcomes and measures. Many studies have found that certain factors, including demographic characteristics, facilitate or hinder the adoption of EBP by physical therapists (PTs). Some studies found correlations between web accessibility and EBP regardless of a PT's geographic location, while others found no significant difference in the use of EBP resources among those with organizational access to the internet. The aim of this study was to evaluate the relationship between availability, accessibility, and use of online EBP resources among PTs in two geographic locations.

Number of Subjects: 162 PTs. United States (n=137) and Nigeria (n=25)
Materials/Methods: Participants completed a survey designed to describe the relationship between certain demographic characteristics and factors such as accessibility, availability and use of technology, behavioral patterns, attitudes, and clinical practices of PTs with regard to use of EBP. Pearson's correlation, and Chi square analyses, were used to explore the relationships between the factors and the demographic characteristics of the subjects.

Results: Response rate was 23%. The majority of respondents (70%) use online databases to access EBP resources. 58.4% reported insufficient time is a barrier to seeking primary EBP resources. The four of the 15 demographic variables found to have significant interactions ($p < .05$) with access to the internet are the country location, age, highest degree obtained, and the number of PTs at a workplace. PTs in Nigeria had a lower rate of access per week (mean 7.56 ± 1.6 times) to the internet compared to their US-based PT counterparts (mean 8.19 ± 1.2 times). Regardless of country, per month, younger PTs ages 20-29 years (mean 21.30 ± 2.8 times), were more likely to report a higher utilization rate of EBP resources than PTs ≥ 60 years (mean 15.00 ± 4.3 times). PTs with doctoral degrees reported a higher usage rate of EBP resources than those with bachelor's degrees. PTs working in larger facilities (with ≥ 10 PTs) used more online EBP resources than PTs working in smaller facilities. This study found no significant relationship between the amount of time spent indirect patient care and the utilization of EBP.

Conclusions: This study found that difficulty in locating and integrating empirical research findings, seemed to have been ameliorated by the availability and accessibility of online EBP resources and the move to the DPT. PTs in this study are taking advantage of innovative technology to engage in EBP. In addition, this group of PTs

also showed a reliance on secondary EBP resources compared to a lower preference for time-consuming primary or original empirical evidence databases.

Clinical Relevance: Online availability and conciseness of EBP resources facilitates comprehension and application in clinical practice.

Culture on Physiotherapy and Social Justice in Management of Non Communicable Diseases

Ushotanefe Useh

There is a rising epidemic of non-communicable diseases such as obesity, hypertension and diabetes mellitus. NCDs have been documented as a growing cause of death and disability in South Africa. There is also documented evidence that demographic profiles of South African populations are important factors influencing the future incidence of NCDs in South Africa. The impact of obesity has become important public health issue with links to culture and traditional practices.

Purpose: The purpose of this study is to investigate documented evidence on physiotherapy in advocacy in the management of NCDs in a typical African community.

Methodology: This study used a systematic review. Data bases were searched using the following keywords NCDs, Physiotherapy, Culture, exercises. There were eleven articles that were critically appraised of which four articles were excluded and seven met the data extraction criterion and were used to answer the review question.

Data analysis: Critical Appraisal skills Programme (CASP) for qualitative studies and Effective Public Health Practice Project (EPHPP) for quantitative studies were used in this study for evaluation purposes. Scoring was done by three researchers who reached an agreement through negotiating. Evidence was graded from good/ strong evidence to evidence not assignable

Sources: The following data bases were used in the study: Google scholar Science direct, on Ebscohost Academic search premier, Africa wide information, Cinahl, Eric, Health source-consumer edition, Health source –nursing or academic edition, master file premier and Medline.

Results: Outcomes from this study revealed no formal advocacy approach by physiotherapists in the management of NCDs. The influence of culture on NCDs was documented.

Conclusion: The prescription of exercises should take cognizance of different cultures. Physiotherapists as leaders and advocates of exercise prescriptions should define common grounds in the inter-professional approach in the care of persons with NCDs.

Physiotherapists should play more roles in Socio-cultural aspects of health in the education of the Community in the prevention of NCDs.

Relevance: The role of physiotherapy in the management of complications associated with NCDs and hypokinetic disorders cannot be over-emphasized. Different cultural practices are documented across African populations. The *Botsetse* tradition of purifying mother and child in the Batswana tradition has also encouraged obesity. Reports on the historical perspective about the eradication of traditional food in East Africa and Morocco were found.

Keywords: *culture and health, physiotherapy, sociology of health and illness, non-communicable disease*

CARDIOPULMONARY AND CARDIOVASCULAR

Self-Perception and Behaviour In Relation to the Risk of IHD in a Cohort of South African Individuals Living with HIV

Ronel Roos, Hellen Myezwa, Helena Van Aswegen

Purpose: The purpose of the study was to determine the personal risk perception and behaviour in relation to the risk of ischaemic heart disease (IHD) in a cohort of South African individuals living with HIV.

Relevance: Individuals living with HIV are said to be at a high risk of developing IHD due to increased longevity, treatment specific causes and virus effects. It is therefore important to determine if individuals' perceive themselves at risk for IHD and if their behaviour increase their risk as this information will inform clinical practice to enable tailored education programmes.

Participants: Thirty individuals living with HIV on HAART for six to twelve months attending an outpatient HIV clinic in Johannesburg South Africa was purposefully sampled.

Methods: A qualitative study design using a semi-structured interview approach was used to gather the data. Individual interviews were held in a private room in the clinic and interviews were tape-recorded for transcription. Participants completed a demographic questionnaire.

Analysis: An inductive approach to data analysis was followed during the study using conventional content analysis. Demographic details of participants were analysed with descriptive data analysis.

Results: The demographic details of participants were: median age 36.5 (31.8 – 45.0) years; women (n = 25; 83.3%) and men (n = 5; 16.7%); the majority of participants (n = 16; 53.3%) had a secondary school education, were employed (n = 17; 56.7%) and were supporting dependents (n = 26; 86.7%). Knowledge and understanding related to IHD and insight into own risk for IHD were identified as two prominent themes. An important finding that the study highlighted was that participants did not perceive themselves to be at risk of IHD due to being HIV⁺ or using HAART in anyway. The majority of participants (n = 15; 50%) did not perceive themselves to be at risk for IHD due to reporting having adequate coping behaviour and living a healthy lifestyle. Twelve (40%) participants did however, reported experiencing physical symptoms. These individuals also had poor diet, elevated stress levels and lack of exercise. Three (10%) participants were unsure.

Conclusion: This study confirmed that an optimistic bias in individuals living with HIV is present regarding their future possibility for developing IHD. Education strategies related to how weight, hypertension and a high salt diet influence one's risk for IHD are required in individuals living with HIV to inform their personal risk perception for IHD.

Implications: Considering the potential burden of IHD on the economy of South Africa, the focus of physiotherapists should be on the prevention of risk factors of IHD through effective education and implementation of physical activity modification programmes following screening of individuals.

Key words: *ischaemic heart disease, risk perception*

Ethics approval: University of the Witwatersrand Ethics clearance certificate (M10238) received.

High Prevalence, Multiplicity and Clustering Lifestyle and Modifiable Cardiovascular Disease Risk Factors among Rural Adolescents in South West Nigeria; Implication for CVD Prevention Program at the Grass Root Level

Nse Odunaiya

Background: Cardiovascular disease (CVD) remains a major cause of morbidity and a leading contributor to mortality worldwide and it is becoming an epidemic in Africa. Most of the CVD risk factors are lifestyle and modifiable risk factors which starts in childhood and adolescence and tracks on to adulthood, however, the paucity of information on adolescents' cardiovascular health is a barrier to effective implementation of CVD prevention program in less developed countries and particularly in the rural areas.

Aim: The study aimed at investigating the prevalence, multiplicity and clustering of CVD risk factors such as smoking, alcohol use, physical inactivity, unhealthy dietary pattern, obesity, abdominal obesity, hypertension and presence of CVD indicators such as angina, breathlessness, chest pain and family history of CVD among rural adolescents in South West Nigeria.

Methodology: Ethical approval was obtained prior to commencement of the study. Permission to conduct the study was obtained from Local Educational Authority and Principals of schools. Informed consent from parents, proxy consent from principals and assents from adolescents were obtained. The study was a cross sectional study of 1079 adolescents aged 15-18 years. Lifestyle CVD risk factors was assessed using a questionnaire developed for monitoring heart health by Odunaiya et al and other modifiable risk factors were assessed using standard objective measures

Results: Result shows that 45.5% of the adolescents had CVD indicators and family history of heart disease. 7.1% had smoking intention. There was no established smoker, 10.2% are hazardous drinkers, 27.9% had low physical activity, 36.5% had moderate activity level and 35.6% had high activity level, 59.8% on high cholesterol diet, 6.1% on low vegetable consumption, 8.1% on low fruit consumption, 65% had a high salt intake, 61.3% preferred their food fried or roasted. Other modifiable CVD risk factors such BMI showed underweight is 23.5% among adolescents and overweight and obesity was 1.4%.

Conclusion: There is high prevalence and clustering of modifiable CVD risk factors among rural adolescents in Nigeria.

Implication: This calls for CVD prevention program at grass root level.

Body Circumference Parameter as Predictor of Percent Body Fat for Female Undergraduates in a Nigeria University Community

Ojo Adesola OJOAWO, Solomon A Adeyanju

Purpose: The report of disability adjusted life lost to cardiovascular diseases in sub-Saharan Africa is at the increasing rate. There is higher mortality rate caused by cardiovascular diseases (CVD) in developing countries including Nigeria. One of the major causes of CVD is obesity. Obesity was reported to be of high prevalence in all parts of Nigeria and affects more women than men. In order to combat the menace of body fat in Nigeria, the accurate measurement of body fat plays an important role. The study was designed to derive a simple equation using body circumference that predicts percent body fat for female undergraduates in a Nigeria University. The equation could be of importance to assess the lean body mass and percent body fat of women in a clinical and research set up.

Material and Method: One hundred and seventy five apparently healthy females undergraduates from a Nigeria University were consecutively selected to participate in the study after obtaining their consent and ethical approval from appropriate authority. The body circumference was measured at the hip, waist, arm, forearm, wrist, thigh and calf using standard protocol. Participants percent body fat (PBF) was measured using Hydrostatic weighing equipment (HSW). Descriptive and inferential statistics were used to analyze the data. The result revealed that there was positive relationship between PBF and weight ($r = 0.714$, $p < 0.001$), BMI $r = 0.741$, $p < 0.001$) wrist circumference ($r = 0.297$ $p < 0.05$) and frame size ($r = 0.297$ $p < 0.05$). Three prediction equations were obtained for prediction of PBF

Equation 1 = $15.54 + 0.47(\text{weight/kg}) - 1.446 (\text{wrist cir./cm})$; equation 2 = $1.113 (\text{BMI}) + 0.141(\text{weight}) - 12.507$ and equation 3 = $1.456 (\text{BMI}) - 11.668$. The relationship between the equations shows a positive correlation between equation 1 and 2 ($r = 0.914$ $p < 0.001$), 1 and 3 ($r = 0.870$, $p < 0.001$) and equation 2 and 3 ($r = 0.993$ $p = 0.001$). More so, our equations had a strong relationship ($r = 0.773$, 0.893 , and 0.905 at $p < 0.000$) with prediction equation by Ejike and Ijeh.

Conclusion: Weight and BMI were found to be predictors of percent body fat with the derived equations. It is suggested that the equations are put to use both in the clinical setting and for research more validation.

Were Patients Who Died Different From Those Who Survived 3 Months After Lower Limb Amputation?

Lonwabo Lungile Godlwana, Aimee Stewart, Eustasius Musenge

Purpose: To compare the premorbid profile of participants who died within three months after lower limb amputation (LLA) to that of survivors.

Relevance: The premorbid status of patients surviving a non-traumatic lower limb amputation in the Johannesburg metropolitan area is unknown. It may be useful to know the premorbid differences in demographic and functional characteristics between patients who survive versus those who die after a lower limb amputation in order to intervene in those patients who are at risk.

Participants: Consecutive sampling was used to recruit one hundred and fifty-four participants, with 147 being eligible for analysis.

Methods: This was a quantitative cross-sectional comparison study. Vascular amputees were included if they were scheduled for first time unilateral lower limb amputation. Participants with co-morbidities that interfered with function pre-operatively were excluded. Institutional ethical clearance was obtained (*Ethical clearance no. M110124*) and the candidate hospitals and participants gave informed consent. A demographic questionnaire, the Barthel Index (BI), the Participation Scale (P-Scale) and the EuroQol Quality of life measure (EQ-5D) were used to interview participants prior to the amputation. Participants were followed up to 3 months to determine survival.

Analysis: IBM SPSS 21 was employed to analyse the data. Descriptive statistics were used to reduce the data. Following data testing for statistical assumptions and distribution, premorbid differences in function, participation and quality of life were analyzed using non-parametric tests for medians of independent samples and Pearson's Chi square was used to test categorical data.

Results: Of the 154 entrants recruited, n=147 were followed up and death was confirmed in n=29 (19%, n=29/154), n=7 were lost to follow up and n=118 were alive. There were no differences in the premorbid median scores for BI (median=20), P-Scale (median=0), EQ-5D index (median=0.264 and 0.193 for the survivors and demised respectively), EQ-5D VAS (median=75 and 70 for the survivors and demised respectively) and age (median=58 and 62 for the survivors and demised respectively) at baseline ($p>0.05$). Individual items (categorical data) of the BI, P-Scale, EQ-5D also showed no differences between the two groups ($p>0.05$) at baseline. Those who died drank significantly more alcohol ($p=0.02$) and smoked significantly more than those who survived ($p=0.002$).

Conclusion: Although the groups were generally comparable in activity levels, participation levels, quality of life and age, being a smoker and drinking alcohol pre-morbidly seems to decrease the chance of survival following LLA.

Implications: This study helps to identify the profile of patient who most likely will not survive three months after a LLA. These findings may help strengthen preoperative programs to minimize death after a LLA especially efforts to emphasise lifestyle modifications long before disability sets in.

Funding source acknowledgement: We thank the MRC grant, Carnegie grant, Faculty Research Fund for the financial assistance that helped us to fund the study.

Keywords: *lower limb amputation, survival, quality of life,*

Comparison of the Effects of Aerobic and Stretching Exercises on Selected Cardiopulmonary Parameters in Female Breast Cancer Survivors

Happiness Anulika Aweto, Sunday Rufus, Akinwumi Akinbo, Olajide Ayinla Olawale

Purpose: Therapeutic approaches that will improve cardiopulmonary capacity and survival rate of BC survivors are a pressing concern. This study compared the effects of aerobic exercise on selected cardiopulmonary parameters in premenopausal and postmenopausal BC survivors with that of stretching exercise.

Relevance: The incidence rate of breast cancer (BC) has continued to rise with low survival rate in economically developing countries. Reduction in cardiopulmonary capacity of BC Survivors, which is positively associated with premature death, is a major problem associated with the disease.

Subjects: Seventy-four female BC survivors with stage I, II and III BC were recruited through referrals from the Radiotherapy and Oncology Department of Lagos University Teaching Hospital (LUTH), Lagos state, Nigeria.

Methods: Informed consent was obtained from each of the subjects and ethical approval was obtained from the Health Research and Ethics Committee of LUTH. The subjects were randomly assigned to 3 groups and each group was further subdivided into subgroups 1 and 2 based on their menopausal status. Group A underwent aerobic exercise using treadmill, Group B - stretching exercises and Group C (control group) had no therapeutic exercise intervention but had group educational and counseling sessions with subjects in the other groups for 30 minutes, once every week. Therapeutic exercise duration began at 15 minutes for weeks 1 – 3 and systematically increased by 5 minutes after every 3 weeks. Frequency of therapeutic exercises was 3 times a week and the study lasted for 12 weeks.

Data Analysis: Statistical Package for Social Sciences (SPSS) version 20.0 was used to analyse data. Paired *t* test was used to compare the changes in the selected variables of the different groups. The significance level was set at $p < 0.05$.

Results: Following 12 weeks intervention, significant improvements were observed in the cardiovascular variables of Groups A_(1&2) - Resting systolic blood pressure: (A₁: $p = 0.00^*$; A₂: $p = 0.01^*$), Resting diastolic blood pressure: (A₁: $p = 0.03^*$; A₂: $p = 0.01^*$) and Resting rate pressure product: (A₁: $p = 0.01^*$; A₂: $p = 0.00^*$). Significant improvements were observed in the cardiovascular variables of Group B₍₂₎ but not in Group B₍₁₎- RSBP: (B₁: $p = 0.12$; B₂: $p = 0.03^*$), RDBP: (B₁: $p = 0.09$; B₂: $p = 0.02^*$) and RRPP: (B₁: $p = 0.12$; B₂: $p = 0.04^*$). As for the pulmonary variables, significant improvements were observed in Arterioxyhaemoglobin saturation (SaO₂) of Group A₍₂₎ ($p = 0.05^*$) and Forced vital capacity (FVC) of Group B₍₁₎ ($p = 0.02^*$). Improvements in the cardiovascular variables of Groups A were more in the premenopausal BC survivors than those of the postmenopausal BC survivors while the reverse was the case for Group B. No improvement was observed in any of the cardiopulmonary parameters of Groups C_(1&2). On comparison between the changes brought about by aerobic and stretching exercises, there were significant differences in the RSBP: (A₁ & B₁: $p = 0.02^*$), RRPP: (A₁ & B₁: $p = 0.01^*$) and VO₂Max: (A₁ & B₁: $p = 0.04^*$) of the premenopausal study groups as well as in the RRPP: (A₂ & B₂: $p = 0.02^*$) and FVC: (A₂ & B₂: $p = 0.02^*$) of the postmenopausal study groups.

Conclusion: Aerobic exercise brought about more significant therapeutic effects on selected cardiovascular variables especially of the premenopausal BC survivors than stretching exercise.

Implication for Physiotherapy/Policy: Physiotherapists should take more active roles in the management of breast cancer survivors.

Keywords: *exercises, cardiopulmonary, breast cancer.*

Funding: This work was unfunded by any organisation or institution.

Ethical Consideration: Ethical approval was obtained from the Health Research and Ethics Committee of the Lagos University Teaching Hospital, Idi-Araba, Lagos.

Reduction in Abdominal Adiposity Resulted in Changes in Cardiovascular Disease Risk Classification and Quality of Life Following a 12-Week Exercise Programme.

Ayodele Akintunde Akinremi, Ayodele Akintunde Akinremi, Arinola Olasunmbo Sanya, Arinola A Sanusi

Background: Burden of cardiovascular disease (CVD) continues to rise worldwide, while low and middle income countries share a disproportionately high incidence and burden of the disease. Preventive strategies aimed at addressing modifiable risk factor such as excess abdominal adiposity have been advocated. However, it is not clear if reduction in abdominal adiposity will influence CVD risk classification; and how such effect, if any, may impact on quality of life.

Aim: This study investigated whether reduction in abdominal adiposity following 12-week exercise programme and will influence cardiovascular risk classification and quality of life in Apparently Healthy Sedentary Nigerian Adult Population

Methods: 105 apparently healthy prospective participants were recruited from the general population using posters and handbills in public places, which were randomly selected in Ibadan, Southwestern Nigeria. 74 who met the inclusion criteria and gave voluntary consent completed the study. Participants were aged between 20 and 60 years, and were not engaged in competitive or recreational sports within the last 6 months. Ethical approval was obtained prior to commencement of study. CVD risk was classified according to the National Institutes of Health classification using Body Mass Index (BMI) and Waist Circumference (WC) into normal and increased risk. At baseline, blood pressure, body mass index (BMI), Quality of life (QoL), WC and WHR of participants were taken; while Quality of life (QoL), WC and WHR were taken at the end of the 12-week exercise programme. QoL was evaluated using WHO QoL BREF. Participants received health education and went through aerobic exercise training thrice weekly for 12 weeks. Exercise comprised of circuit training at 65% maximum heart rate for 45 minutes. Descriptive statistics of mean and standard deviation was used to summarize the data, while independent t-test was used to test for significant difference in continuous variables. Chi square was used to test for difference in categorical variables. Alpha level was set at $p < 0.05$.

Result: At baseline, parameters of participants were: age (35.4 ± 9.7); BMI (28.9 ± 4.7 kg/m²); WC (94.4 ± 10.8 cm) and QoL (65.6 ± 9.1 vs 67.6 ± 9.4); with 48 (65%) participants having normal and 22 (35%) having increased CVD risk respectively. At the end of the 12-week exercise, there were significant differences in WC (94.4 ± 10.8 vs 89.2 ± 9.8 cm); BMI (28.9 ± 4.7 vs 24.5 ± 8.2 kg/m²) and QoL (65.6 ± 9.1 vs 78.2 ± 11.4) compared with baseline. Post-exercise CVD risk classification showed that 56 (76%) had normal CVD

risk and 18(24%) had increased risk. There was significant difference in the pre- and post- exercise CVD risk classification proportions, with a reduced number of participants with increased CVD risk.

Conclusion: Reduction in abdominal adiposity following a 12-week aerobic exercise programme resulted in changes in CVD risk classification and improvement quality of life in sedentary Nigerian adult population.

Cardiovascular Risk Profile of Post-Menopausal Women in a Semi-Urban Community in Nigeria

Taofeek Oluwole Awotidebe, Rufus A Adedoyin, Ifedayo L Olola, Chidozie E Mbada, Odunayo T Akinola

Purpose: This study assessed the cardiovascular risk profile of post-menopausal women from a semi-urban community in Nigeria.

Relevance: Menopause is associated with a myriad of chronic health risks. Participants: One hundred and twenty menopausal women participated in this study.

Method: This is a cross-sectional study. The respondents were recruited from Ife Central Local Government Area, Ile - Ife, Nigeria using a multistage sampling technique. The Framingham Heart Study Questionnaire was used to assess cardiovascular risk. Risk scores were classified as low (0-19), medium (20-29) and high-risk profiles (40+). Socio-Economic Status was assessed using a questionnaire while cardiovascular and anthropometric parameters were measured following standard procedures.

Analysis: Data were analyzed using descriptive and inferential statistics. Alpha level was set at 0.05.

Results: The mean age, weight and Body Mass Index (BMI) of respondents were 64.9 ± 8.4 years, 73.4 ± 15.2 kg and 27.3 ± 5.4 kg/m² respectively. Half of the respondents (53.3%) were in the low socio-economic class. A majority (64.2%) of respondents had over five years duration of onset of menopause, 32.5% of the respondents had high blood pressure while 10.8% had high cardiovascular risk. High CVD risk was higher among individuals with over five years of menopause (92.3%). Logistic regression model revealed that age, BMI, occupation, onset time of menopause and blood pressure status were significant predictors of cardiovascular risk among post-menopausal women ($p < 0.05$).

Conclusion: Prevalence of CVD risk was high among Nigerian post-menopausal women in a semi-urban community. Age, body mass index, duration of menopause and blood pressure level were significant predictors of high cardiovascular risk.

Implication: This study may inform policy formulation in reducing the prevalence of cardiovascular disease among postmenopausal women.

Knowledge of Nigerian Female Undergraduates on Obesity as a Risk Factor for Cardiovascular Diseases in Women

Taofeek Oluwole Awotidebe, Rufus A Adedoyin, Busola A Fatoogun, Chidozie E Mbada, Odunayo T Akinola

Purpose: There is an increasing predilection to obesity and consequent Cardiovascular Diseases (CVD) among women. This study investigated knowledge of Nigerian female undergraduates on obesity as a risk factor for CVD in women. Participants: 400 female undergraduate students from the Obafemi Awolowo University, Ile-Ife, Nigeria participated in this study.

Methods: This cross-sectional study used a self-developed questionnaire to assess respondents' socio-demographic variables and knowledge of obesity as a risk factor for CVD. The questionnaire was tested in a pilot study using a test retest reliability method: Descriptive statistics and spearman rank correlation were used for data analysis. Alpha level was set at 0.05.

Results: Excessive high calorie intake, 322(80.5%), fatty food intake, 393(98.3%) and physical inactivity, 360(90.0%) were the most implicated causative factors for obesity. Three hundred and thirty five, 83.8% of the respondents recognized obesity as a leading cause of heart attack. More than half, 242(60.5%) of the respondents identified obesity as a risk factor for CVD. There was no significant correlation between knowledge score of obesity as a risk factor for CVD and each of age ($r = -0.045$; $p = 0.367$), level of study ($r = 0.037$; $p = 0.456$) and source of information ($r = -0.005$; $p = 0.923$).

Conclusion: Nigerian female undergraduates demonstrated fair knowledge of obesity as a risk factor for cardiovascular diseases in women and knowledge was not significantly influenced by age, level of study and source of information.

Implication: Obesity is a public health issue and adequate knowledge may help reduce prevalence of cardiovascular disease.

EDUCATION

The Use of Portfolios in Community Physiotherapy and Public Health Teaching to Enhance Reflective Practice

Morake Douglas MALEKA

Background and Purpose: The department of physiotherapy at the University of the Witwatersrand has a programme that allows fourth year physiotherapy students to experience learning in a rural setting. This experience is assessed using a portfolio (a reflective diary is an integral part of a portfolio). To date, the portfolios have only been assessed in terms of the students achieving the learning objectives. The process has not been evaluated for its effectiveness in promoting a reflective learner. A reflective learner is considered as one who will develop critical thinking and better accountability. The aim of this study was to assess evidence of reflective practice from the student's reflective diaries.

Method and Analysis: A qualitative approach was used to assess evidence of reflective practice in student reflective diaries. Fourth year physiotherapy students rural block reflective diaries (part of the portfolios) were used to collect data. Coding and guided content analysis were done using a framework compiled from the literature. The coding framework outlined the levels of reflective practice from the lowest level being identifying learning outcomes to the highest being abstract concept formation.

Results: Forty eight portfolios with reflective diaries were available for analysis by the researchers. Data saturation was obtained after eight reflective diaries were analysed. The majority of student diaries reflected a low level of reflective practice, with only a few attaining a high level of reflective practice.

Conclusion: Physiotherapy students who experience learning in a rural setting achieve low levels of reflective practice. A minority of students were able to progress their reflection to reveal elements of critical thought, reflective thinking and further still, abstract concept formation.

Implication: Portfolio is a very good assessment tool to assess and enhance reflective practice for physiotherapy students.

Key words: *reflective practice, portfolio, physiotherapy*

Funding Source and Acknowledgement: This study was funded by the physiotherapy department of the University of the Witwatersrand, Johannesburg, South Africa.

Ethics approval: Ethical clearance was applied for and obtained from the Human Ethics Research Committee of the University of the Witwatersrand, Johannesburg, South Africa.

Access to Education in Sierra Leone: Lessons for a Disability Inclusive Education Post-2015 Agenda

Donald Njelesani

Purpose: This study sought to describe the experience of children with disabilities accessing education in Sierra Leone and understand the key issues to achieving quality inclusive education. The study was part of a larger four-country study exploring access to education and child protection services in West Africa.

Relevance: All children regardless of ability level have the same right to develop their potential and access education (UNCRPD, 2006). Children with disabilities are less likely to start school, have lower rates of school attendance and lower transition rates to higher levels of education (Filmer, 2008). This study is timely as it contributes to ongoing debates in the literature about appropriate type of education between inclusive education and special education or the balance of the two. The findings contribute to the development of a disability inclusive education post-2015 framework.

Participants: In total 219 stakeholders participated in the study representing rural and urban settings in four provinces. Participants included children with disabilities, parents, community leaders, disability people's organizations and government representatives.

Methods: Data collection included key informant interviews, focus groups, demographic questionnaires, document reviews and case studies.

Analysis: Detailed summaries were developed and analyzed. Thematic analysis (Braun & Clarke, 2008) was conducted to describe the overall themes surrounding the experiences and needs of children with disabilities regarding education.

Results: The results point to the complexity of addressing access to education for children with disabilities with the school environment being particularly notable in addition to the attitude of teachers, administrators and students, and their understanding of what it means when a child has a disability. Further, the findings point to the need to pay attention to the training of teachers, the majority of whom have not received training on disability which has implications on education quality and outcomes. Children recognized their right to education; however the study revealed existing beliefs in the community that education for children with disabilities amounts to a waste of resources and was not beneficial to the development of the child or to the child's family.

Conclusions: While the focus in education and international development has been largely centered on getting more children with disabilities into schools, the findings from the study highlight they need for a focus on both access and quality in education.

Implications: To achieve a disability inclusive education post-2015 framework understanding the needs and experiences of children with disabilities and also including parents with disabilities who are often living in poverty and may withdraw children from school as they seek ways to support and care for their families.

A Framework for Clinical Communication Skills Training In Undergraduate Health Care Students

Elizabeth Cornelia Janse van Vuuren

Purpose: Clinical communication skills (CCS) are fundamental to good quality health care and health outcomes, but remain a problematic area for both students and qualified health care professionals, including Physiotherapy. As CCS can be taught and developed, the aim of this study was to propose a practical framework for the teaching of verbal and written CCS to undergraduate health care students as an integral part of their learning.

Relevance: The complexity of acquiring adequate CCS to deliver good quality health care is however further complicated by attaining and integrating all of the other required clinical skills as well as professional attitudes to enable health care students and professionals to effectively integrate knowledge with practice, within the teaching process. A number of strategies have been described for the teaching of CCS (also in Physiotherapy training) and include, amongst others, role playing, video demonstrations, audio-visual aids, simulated/standardised patients, clinical training, peer evaluation and group interactions. The most appropriate method of delivery is carefully selected within the teaching process to address the teaching of a specific communication skill in order for it to be learned optimally.

Methods and study participants: A sequential mixed-methods approach was followed where the first phase of the research consisted of a questionnaire survey. Results from this survey yielded the development of an interview schedule for the second, qualitative phase of the study.

All third year physiotherapy students from the University of the Free State (UFS) who engaged in clinical practice for the first time in the research year, was included in the study sample (n=35).

Analysis: Descriptive statistics was calculated for the quantitative data, whilst the qualitative data was initially transcribed verbatim from the voice recordings. The researchers utilised inductive coding to analyse transcribed data.

The study was approved by the Ethics committee of the Faculty of Health Sciences, UFS (ECUFS Stud nr 78/2011). After providing study participants with information

letters, informed consent was obtained from all study participants for both the survey and interviews.

Results: The main problem areas with regard to CCS of health care students were identified as communication with patients, their families, the interdisciplinary team as well as written communication. The basic principles of skills training were additionally explored and identified the ideal progression of skills from a theoretical level towards the clinical application thereof.

Conclusion and implications: Integration of this information enabled the researcher to develop a practical framework for CCS training of undergraduate health care students, focusing on the problems experienced with CCS on the one hand and basic skills training principles on the other. This framework furthermore provides a basis for research related to other problem areas of CCS, especially within the field of Physiotherapy training, and the continued development of CCS beyond undergraduate health care studies.

Acknowledgements: The undergraduate students whom assisted with the execution of this research study as well as the Biostatititan whom assisted with the analysis of the quantitative data.

HEALTH CARE ADMINISTRATION AND POLICY

Physiotherapists' and Patients' Perception of Factors Influencing Treatment Non-Adherence in Physiotherapy

Chidozie Emmanuel Mbada, Akinola Akinboyenle Samson, Taofeek Oluwale Awotidebe, Abiola Oladele Ogundele

Purpose: This study assessed the perception of physiotherapists and patients on factors influencing treatment non-adherence in physiotherapy.

Relevance: Poor adherence to treatment is common and may adversely affect outcomes, efficiency and healthcare cost. However, it is not clear which factors act as barriers to treatment adherence in physiotherapy.

Participants: Thirty four patients who had missed at least two scheduled appointments at the out-patient physiotherapy clinic of the Obafemi Awolowo University Teaching Hospitals Complex, Ile-Ife, Nigeria were recruited. Likewise, 62 physiotherapists from five purposively selected physiotherapy clinics within South-west, Nigeria responded in this study.

Methods: This cross-sectional study employed two types of questionnaires adapted from similar studies and tested for content validity for the physiotherapist and patient samples respectively.

Analysis: Data obtained were summarized using frequency and percentages. Spearman rank correlation analysis was used to correlate physiotherapists' and patients' perception at 0.05 alpha level.

Results: Cost of physiotherapy (55.9%), reliance on career (55.9%) and interference of treatment with family routines (55.9%) were the most agreed perceived factors for treatment non-adherence from patients' perspective; while psychosocial problems 49(79.0%), loss of patients' interest in treatment 48(77.5%) and outcome of previous treatments 46(74.1%) were the most agreed perceived factors for treatment non-adherence from physiotherapists' perspective. Reliance on career (n=11) and low socioeconomic status (n=13) were the most ranked factors influencing treatment non-adherence by the patients and physiotherapists respectively. There was no significant relationship between the patients' and physiotherapists' perception ($p>0.05$).

Conclusions: This study showed that causative factors for treatment non-adherence in physiotherapy are strongly dependent on the patient's individual factors and are multifarious ranging from extrinsic to intrinsic variables. Perceptions of physiotherapists and patients on factors influencing treatment non-adherence in physiotherapy are dissimilar.

Implications: Understanding factors influencing treatment non-adherence are useful in interventional strategies aimed at enhancing the efficiency of treatment delivery and improved physiotherapy service delivery.

Perception of Direct Access and Patients' Self-Referral among Nigerian Physical Therapists

Chidozie Emmanuel Mbada, Kayode David Ojetola, Rufus Adesoji Adedoyin, Abiola Oladele Ogundele, Olubusola Esther Johnson, Taofeek Oluwale Awotidebe, Teslim Ayodele Onigbinde

Purpose: This study assessed the perception of Nigerian physiotherapists on direct access and patients' self-referral to Physical Therapy (PT).

Relevance: The global advocacy for direct access and patients' self-referral to PT is a significant component of professional autonomy and recognition. However, the attainment of this clarion call in sub-Sahara Africa may be hamstrung by challenges similar or different from those observed in the developed nations.

Participants: One hundred physical therapists recruited from ten purposively selected public funded out-patient facilities from South-West, Nigeria volunteered for this study, yielding a response rate of 66.7%.

Methods: This cross-sectional survey employed the use of a previously validated questionnaire for WCPT on global view of direct access and patient self-referral.

Analysis: Data was analyzed using descriptive statistics of frequency, percentages and graphs.

Results: Out-of-pocket reimbursement was the most common method of payment for PT (Private (86%) vs. Public (71%) setting). A majority of respondents reported that there is legislation (91%) regulating the scope of practice (84%) of PT profession in Nigeria. Half (51%) of these respondents believed the legislation is a barrier to first contact practice and self-referral (97%). A majority of the respondents believed there were no inherent limitations in self-referral to PT in private (83%) and public (89%) practice respectively. More than half (60%) of the respondents believed that graduates of entry-level PT programmes were adequately prepared to accept self-referral. The respondents opined that the public (60%) and the Nigeria Society of Physiotherapy (40%) are in support of direct access and patients' self-referral. About half of the respondents (47%) opined that physicians may not be in favour of direct access to PT. A majority (80%) of the respondents opined medical views as a major current barrier to direct access in PT while medical support (41%) is the most implicated facilitator of direct access in PT.

Conclusions: Direct access and patients' self-referral to PT in Nigeria is hamstrung by a gamut of factors with medical views and medical support acting as the predominant barrier and facilitator respectively.

Implications: Availability and accessibility of patients/clients to PT service without the gate-keeping of a third party in sub-Sahara Africa still require concerted campaign and advocacy through alliance with medical profession and lobbying the politicians for change in legislation. Furthermore, raising the current educational entry level to the baccalaureate doctor of physical therapy and continuous professional development for practicing physical therapists will strengthen advocacy and alliance.

NEUROLOGY

Socio-demographic and Personality Profile as Correlates of Motor Function during Early Stage Rehabilitation of Individuals with Spinal Cord Injury

Talhatu Kolapo Hamzat, Bolanle Morenike S. Tinubu

Purpose: Non-clinical factors like personality and psychological profile of an individual, socio-cultural issues and personal beliefs (which may be shaped by where that person is from or lives), as well as rehabilitation settings, may influence what predict discharge outcome after Spinal Cord Injury (SCI). Association between Motor Function (MF) and each of selected socio-demographic and clinical factors (type, group and cause of cord injury), personality type and self-esteem was studied among Nigerian patients with SCI receiving in-patient care at a tertiary health facility.

Relevance: Earlier reports indicated that patients with traumatic SCI have a complex interplay of socio-demographic and injury-related factors that can impact on discharge outcomes. It is therefore important for the Physiotherapist to be equipped with knowledge of factors associated with or can predict long term outcomes in patients who have SCI at early stage for rehabilitation decision-making process.

Methods: This prospective observational study involved patients who sustained SCI and were admitted into the University College Hospital, Ibadan in South-West Nigeria. Eligibility criteria included reporting at the facility within 72hours post-injury and being fully conscious at the time of the study. All those who satisfied the criteria were initially assessed within 7days post-injury. Socio-demographic information namely age, gender, marital status, educational status were gathered through patient interview. The American Spinal Injury Association International Standards for Neurological classification of Spinal Cord Injury assessment scale was used to classify the cord injury; while Eysenck personality questionnaire and the Rosenberg self-esteem scale were administered to assess personality profile and self-esteem respectively at the point of recruitment and again at 2nd, 4th, 6th, 8th, and 10th weeks of hospital admission. Analysis: Data were entered using the SPSS version 15 software. Motor function across weeks among all participants and based on socio-demographic and clinical variables categories were tested using the one way repeated measure analysis of variance. The relationship between Motor function, Self-esteem and Personality scores were tested using Spearman rank correlation analysis at $p=0.05$.

Results: Thirty patients with SCI were recruited out of which 28 comprising 21 males and 7 females (32.97 ± 11.12 years) completed the study. No significant association was observed between the type of cord injury and age ($p=0.26$); gender ($p=0.20$); marital

status ($p= 0.46$); level of education ($p= 0.33$). There was no statistically significant clinical factors differential with type of cord injury ($p>0.05$). Significant increase in motor function scores across weeks among all the participants, and significant association was found between motor function and type of cord injury ($p= 0.01$), and group of cord injury ($p= 0.04$). No significant association was found between motor function and personality of the patients, but motor function was associated with self-esteem scores over time.

Conclusion: Post-SCI motor function recovery was influenced by the type and group of cord injury and self-esteem of the patients over the study period. Implication: There is need for physiotherapists to take both clinical and non-clinical factors into consideration while planning intervention for individuals who have sustained a spinal cord injury, especially at the early phase of rehabilitation.

Clinical Predictors of Functional Recovery at Six-Month Post Stroke

Caleb Ademola Gbiri, Aderonke O Akinpelu, Adesola Ogunniyi, Werdie C.W.V. Staden, Abiodun E Akinwuntan

Purpose: To investigate predictors of functional recovery at six-month among Nigerians with first-ever stroke. **Methods:** Sixty-five individuals with first ever stroke were recruited at stroke-onset from the University College Hospital, Ibadan, Nigeria. Stroke severity was measured using the National Institute of Health Stroke-Scale. Stroke was classified using the results of the CT scan of the brain. The weighted-standard values of Barthel Index and Frenchay Activities Index were combined to indicate Comprehensive Activities of Daily Living (CADL). Depression and Trunk-Control (TC) were measured using the Centre for Epidemiological Scale-Depression and the Postural Assessment-Scale for Stroke-Patients respectively. Measurements were taken every month for six months. Data were analyzed using linear regression and survival analysis at $p=0.05$.

Results: Fifty-five (mean age = 57.4 ± 14.8 years, 28 males) participants completed the study; ten died within a week of stroke. Twenty-six (47.3%) had ischaemic stroke and 29 (52.7%) had haemorrhagic stroke. Forty of the 55 participants were married and of the 40, 31 reported spousal support. Type of stroke ($\beta= 7.5$) and age ($\beta=-0.4$) significantly predicted functional recovery after controlling for co-morbidity ($\beta= -2.1$), brainstem lesion ($\beta= -0.2$), stroke severity ($\beta= -0.6$) and TC ($\beta= 0.7$) and depression ($\beta= -0.1$).

Conclusion: Functional recovery at six-month is better in individuals who had haemorrhagic stroke. However, functional recovery decreases as age increases. The combination of haemorrhagic stroke with the presence of co-morbidity predicted death after stroke.

Acute Changes in Upper Limb Problems Post Stroke.

Nicolette Comley-White, Witness Mudzi

Purpose: To establish the acute changes that occur in the upper limb post stroke regarding shoulder subluxation, shoulder pain, upper limb motor function and muscle tone.

Relevance: In order for one to provide optimum treatment to a patient post stroke, one needs accurate ideas of what problems the patient potentially faces. There is differing literature with regards to the acute changes that occur in the upper limb post stroke and the frequency. By determining this, prevention and treatment within the rehabilitation setting can be influenced and consequently impact on the quality of life of patients with stroke.

Participants: This study recruited 51 participants within two weeks of stroke presenting with upper involvement (hemiplegia). They were excluded if they had receptive aphasia and/or were medically unstable. Informed consent was sought from patients admitted to Helen Joseph and Charlotte Maxeke Johannesburg. Academic Hospitals in Johannesburg, South Africa.

Method: A longitudinal study design was used for this study. Each participant was assessed at baseline, week 1, week 2 and week 6 post baseline assessment. The participants were assessed for shoulder subluxation (measured using the finger width measurement system), shoulder pain (measured using the Ritchie Articular Index), upper limb motor function (measured using the upper limb subscales 6, 7 and 8 of the Motor Assessment Scale) and muscle tone (measured using the Modified Ashworth Scale). In the event of discharge, the patients were followed up and assessed as out-patients at the relevant hospital. Ethical approval was granted by the Human Research Ethics Committee (Medical) at the University of the Witwatersrand.

Analysis: Descriptive statistics were used to analyse the data. Data were presented in tables using frequencies and percentages for the following variables: age, gender, side of stroke, shoulder subluxation, shoulder pain, upper limb motor function and muscle tone.

Results: The study participants were generally young with a mean age of 49.2 ± 12.6 years. There more females (56.9%) than males and the majority of the study sample (58.8%) had right cerebrovascular accident. The number of patients presenting with shoulder subluxation increased from 35.3% at baseline to 40.0% at the six week follow up time. The same trend was observed for shoulder pain (47.1% at baseline to 56.7% at six weeks) and muscle tone increase which affected 21.6% of the patients at baseline and 30.6% at the two week follow up. Motor function was poor throughout the study

period agreeing with the observed number of patients with shoulder subluxation, pain and muscle tone problems.

Implication and Conclusion: This study confirmed the presence of the commonly known upper limb problems post stroke. The fact that the proportion of patients with these problems increased over the study period confirms that upper limb rehabilitation is a real challenge for physiotherapists and other healthcare providers. It is imperative that one find ways of addressing these common problems if one is to improve the quality of life post stroke.

Keywords: *Stroke; upper limb function; upper limb complications*

Funding Source: University of the Witwatersrand

The Effect of Electrical Stimulation of the Abdominal Muscles on Function in Patients Who Have Had a Stroke: A Randomised Control Trial

Jennifer Margaret Jelsma, Crystal Moosajie

Background: Re-educating the function of the trunk muscles is essential in successful rehabilitation of patients with stroke. Functional Electrical Stimulation (FES) of the abdominal muscles is an intervention which may result in increasing the activation of these muscles and improving proximal stability and function.

Purpose: The aim of this study was to evaluate the effect of FES of the abdominals on the functional recovery in patients with stroke, when integrated into physiotherapy treatment.

Study Design and Participants: A single blinded randomised experimental study design was used. Participants were between the ages of 18 to 85 years of age who presented with a first time ever stroke which occurred within the past three months and was confirmed by an MRI or CT scan and a neurologist.

Instrumentation: The Barthel Index (BI) and the Rivermead Motor Assessment were used to monitor changes in function and motor recovery, respectively. The EQ-5D was used to monitor the health related quality of life and the QALY (quality adjusted life year) tariff was calculated. The Physiological Cost Index (PCI) was measured at discharge and at and at the four week follow-up for those participants able to walk either with the use of an aid or independently. Both channels of the FES Microstimulator were applied to the external oblique abdominal muscle on the affected side and were applied from the first day of inclusion to the study.

Data Analysis: Non-parametric statistics were used in most cases, as the sample size was small and the data were generally ordinal. The Mann-Whitney U was used to

compare the two groups after the intervention on the ordinal outcome measures. The effect sizes were calculated for the primary outcome variables of BI, RMA Gross Function, the EQ-5DY tariff and the PCI.

Results: There were 19 participants enrolled in the study, nine in the control group and ten in the experimental group. The change in BI scores from admission to follow-up ($p=0.034$), the EQ-5D usual activities at discharge ($p=0.015$) and the PCI at discharge ($p=0.037$) were found to be significantly improved in the experimental group. The size of the effect of treatment on the difference in BI scores from admission to discharge was 0.75, a medium effect size. The treatment effect size on the EQ-5D tariff was 0.83 which indicates a large effect. The Mann Whitney U indicated a significantly lower ranking of PCI scores in the experimental group at discharge, indicating less effort on walking in this group.

Discussion and conclusion: FES appears feasible and might be beneficial in improving function in patients with stroke. Although the sample sizes were smaller than anticipated and resulted in non-significant probability values on testing of some variables, the effect size for most outcome parameters was medium to large. FES can be integrated, albeit cautiously, into physiotherapy management and the impact monitored on an on-going basis. As the results are promising but not conclusive, there is room for a large scale, multi-centre trial to further investigate the efficacy of this intervention.

Psycho-Social Determinants of Functional Independence in Post-Stroke Individuals

Caleb Ademola Gbiri, Aderonke O Akinpelu, Adesola Ogunniyi, Werdie C.W.V Staden

Purpose: Psycho-social factors often play important role in effective functional performance. This study investigated psycho-social determinants of achievement of functional independence in first-ever stroke survivors.

Methods: Sixty-five first-ever stroke patients were consecutively recruited within 24 hours of stroke-onset from the University College Hospital, Ibadan, Nigeria. Stroke was classified using the results of brains' CT scan. The weighted values of Barthel and Frenchay Activities Indexes were combined to indicate functional performance. Depression was assessed with Centre for Epidemiological Scale-Depression scale. Spousal support was measured in numerical scale. Measurements were taken fortnightly for one year. Data were analyzed using linear regression at $p=0.05$.

Results: Fifty-five (28 males, 27 females) participants completed the study given mortality rate of 15.4% and their mean age was 57.4 ± 14.8 years. Forty of the participants were married out of which 76.4% of them reported enjoying spousal support. Twenty-six (47.3%) had ischaemic stroke and 29 (52.7%) had haemorrhagic stroke. Age ($\beta = 3.2$), marital status ($\beta = 2.2$), spousal support ($\beta = 7.5$), educational qualification ($\beta = 2.8$), type of marriage ($\beta = -3.1$), incontinence ($\beta = -1.4$) and depression ($\beta = -4.1$) significantly determined functional independence at one year post-stroke. Spousal support contributed 48% while age, type of marriage, marital status and educational qualifications contributed 20%, 10% 7% and 5% to post-stroke functionality respectively.

Conclusion: Being married into monogamous family and having spousal support, and the absence of incontinence and depression positively determine achievement of functional independence among individuals with first-ever stroke.

Health-Seeking Behaviour Adopted by Nigerian Stroke Survivors

Caleb Ademola Gbiri, Olajide O Olawale, Nwabuogochukwu Justinah Obi, Werdie C.W. Staden

Background and Purpose: While studies have established different determinants of health-seeking behaviour in various ailments among different communities, there is dearth of literature on health seeking behaviour among Nigerian stroke survivors. This study investigated the different health seeking behavior adopted by Nigerian stroke survivors.

Method: This study involved 150 stroke survivors receiving care in secondary and tertiary health institutions in Lagos, Nigeria. The aims of the study were explained to each of the participants and their informed consent was obtained. Self-administered questionnaires were used to explore variables from the participant. The data was analysed using Spearman's rank Correlation Coefficient at 0.05 significance level.

Results: One hundred and fifty questionnaires were given out and one hundred and forty three were returned and valid for data analysis giving validity rate of 95.3%. Majority (71.3%) of respondents did not know they were having a stroke, while some of the respondents believed it was a spiritual attack. Majority of respondents (45.5%) went to private hospitals as first point of contact at stroke occurrence. Majority (74.1%) of respondents would go to government hospitals as their first point of contact if given a second chance.

Conclusion: A high percentage of stroke survivors in Lagos State do not first seek care in health institutions where adequate equipment and personnel for effective stroke management exist. There is inadequate knowledge of the society about stroke and the facility to contact at its occurrence.

OBSTETRICS, GYNACOLOGY AND WOMEN'S HEALTH

Knowledge, Attitude and Practice of Antenatal and Postnatal Exercises among Antenatal and Postnatal Women

Chidozie Emmanuel Mbada, Olubukayomi Ebunoluwa Adebayo, Adebajo Babalola Adeyemi, Olabisi Aderonke Akinwande, Olumide Olasunkanmi Dada, Taofeek Oluwole Awotidebe, Ibidun Alonge

Purpose: This study assessed knowledge, attitude and practice of antenatal and postnatal exercises among women.

Relevance: Benefits of exercise during and after pregnancy have been stressed. However, empirical reports on knowledge, attitude and practice of antenatal and postnatal exercise among women are still few.

Participants: The study was carried out among 365 women attending antenatal and postnatal hospitals in Ile – Ife, Nigeria.

Methods: A 3-section questionnaire that assessed socio-demographic, maternal characteristics, knowledge, attitude and practice of antenatal and postnatal exercises was used in this cross-sectional study.

Analysis: Descriptive statistics of mean, standard deviation and frequency were used to summarize data. Inferential statistic of Chi-square was used to test the associations between knowledge, attitude and practice of mothers towards antenatal and postnatal exercise. Alpha level was set at $p < 0.05$.

Results: Awareness of antenatal and postnatal exercises was 92.6% and 61.9% respectively. 318(87.1%) respondents had a positive attitude to exercise while 81.9% engaged in exercise. There was significant association between knowledge about benefits of antenatal and postnatal exercise and each of age and educational qualification ($p < 0.05$). 180(49.3%) had above average knowledge, 11(3%) had average knowledge, while 174(47.7%) had below average knowledge regarding knowledge on benefits of antenatal exercise. Regarding knowledge on benefits of postnatal exercises 174(47.7%) had above average knowledge, 15(4.1%) had average knowledge, while 176(48.2%) had below average knowledge. regarding knowledge on benefits of postnatal exercises. 106(35.5%) of the women were on self-prescription, 86(28.8%) on prescription by nurses, 83(27.8%) on prescription by physiotherapists, 49(16.4%) on prescription by doctors and 17(5.7%) on prescription by their spouses. Lack of information about exercise (53%) and tiredness (43%) accounted mostly for not engaging in exercise.

Conclusions: Knowledge and practice of women towards antenatal and postnatal exercises was inadequate. However, the women had a positive attitude towards exercise. Lack of information on exercise, tiredness and lack of motivation were the main reasons for poor exercise practice. Self-prescription of antenatal and postnatal exercise was a common practice among the women. Level of education was significantly associated with knowledge, attitude and practice of antenatal and postnatal exercises.

Implications: Studies on knowledge, attitude and practice of exercise are important to understand the barriers and facilitators to exercise. However, such studies are scant among pregnant and nursing mothers.

Menopausal Women with Chronic Conditions: Influence of Psychosocial Factors on Exercise and Physical Activity Level.

Omoyemi Olubunmi Ogwumike, Olusola Dorcas Olasore, Ade Fatai Adeniyi

Background: Women in the menopausal transition experience body changes directly related to hormonal variation. Decrease in estrogen level may start a rapid decline in muscle strength, bone mineral density, aerobic fitness and increased body weight. All these in turn are associated with development of chronic conditions such as hypertension, heart disease, diabetes and others. Psychosocial factors have been documented as being capable of influencing physical activity in chronic conditions.

Objective: This study investigated influence of psychosocial factors such as self-efficacy, family support and perceived barriers to exercise on physical activity level of menopausal women with chronic conditions in Nigeria.

Methods: A cross-sectional survey in which menopausal women with hypertension, diabetes and osteoarthritis were recruited from secondary and tertiary health centres in Ibadan and Ijebu-Ode in Oyo and Ogun States of Nigeria respectively. Physical activity was assessed with the international physical activity questionnaire (IPAQ), while exercise self-efficacy scale and family version of the social support questionnaire as well as barrier scale of the exercise benefit and barrier scale were used to assess psychosocial variables and perceived barriers to exercise respectively. Informed consent was obtained from all participants. Data was analysed using Chi-square and logistic regression analysis. Probability level was set at 0.05.

Results: Three hundred and five women, predominantly postmenopausal 249(83.8%) participated in the study and hypertension 117 (38.4%) was the most prevalent chronic condition. Majority of the menopausal women 212 (69.5%) reported low physical activity level with 138 (45.2%) reporting high barriers to exercise. Significant direct association between physical activity level and exercise self-efficacy ($P<0.05$) was reported while

negative significant association was reported between physical activity level and perceived barriers ($p < 0.05$). No significant association was observed between physical activity and family support.

Conclusion: Self-efficacy and perceived barriers to exercise significantly influenced physical activity level and exercise of menopausal women in this study, while family support played no prominent role.

Particular considerations should be placed on psychosocial factors such as self-efficacy and perceived barriers when designing interventions to improve physical activity levels of menopausal women in Nigeria.

ORTHOPAEDIC AND MANUAL PHYSIOTHERAPY

Reliability of an adaptation of Linear Excursion Measurement Device

Joseph Onuwa Umunnah, Violet Akwuakananwa Nwaefulu, Chris Udoka Okafor, Yvonne Ebere Ihedigbo

Background: The Linear Excursion Measurement Device (LEMD) is used to detect and objectively record changes in cervical posture over time and in quantifying the effectiveness of physiotherapy interventions for posture-related problems.

Objective: The study investigated the temporal stability and reliability of measurements obtained at two selected landmarks from the LEMD; and the influence of time of day on the measurements obtained from the device.

Methods: The study involved 46 volunteering apparently healthy undergraduates (mean age 22.3 ± 2.26 years). Participants' bio-data were obtained. Vertical and horizontal movements at the selected landmarks were obtained from the LEMD (morning and afternoon) for four consecutive days, and the excursion angles computed for each day. Data obtained were presented using descriptive statistics of mean and standard deviation, and analyzed using inferential statistics of Paired t-test and Pearson Product Moment Correlation Coefficient. Level of significance was set at 0.05.

Results: Average total time of measurement per participant for the 4 days was 145 seconds. No significant difference was found between morning and afternoon computed excursion angles at both landmarks; and in the average daily computed excursion angles within the 4 days ($P > 0.05$ in each case). A significant relationship existed between day 1 and 2 ($r = 0.247$, $r = 0.316$), day 1 and 3 ($r = 0.425$, $r = 0.478$), and day 1 and 4 ($r = 0.274$, $r = 0.592$) at both landmarks respectively.

Conclusions: LEMD is time efficient and reliable with temporal stability, and can be used by physiotherapists for assessing and quantifying improvement with intervention in patients with cervical spine problems.

Associations between Physical Work Load, Psychosocial Work Factors and Musculoskeletal Symptoms among a Sample of Dentists in Nigeria

Adegoke Moyinoluwa Akinfeleye

Background: Systematic reviews of epidemiological studies on work related musculoskeletal disorders (WMSDs) have thrown up evidence pointing to physical work load and psychosocial work factors as strong risk factors for the developments of these disorders. Dentists are prone to WRMSDs; however studies exploring association of these risk factors and WMSDs in the occupational group are scarce.

Objective: To explore the associations between perceived physical workload, psychosocial work factors and reported WMSDs among a sample of Dentist in Lagos, Nigeria.

Method: A cross sectional survey using a self-administered questionnaire was carried out among 206 dentists (response rate 81.5%) in Lagos, Nigeria. Contents of the questionnaire captured information on personal characteristics, physical and psychosocial work land and reported occurrence of WMSDs in the previous 12 months.

Results: The 12 months prevalence of WMSDs among the respondents was 83%, with low back pain being the most reported symptoms (51%). Female dentists reported higher perceived workload and psychosocial work demands (OR= 2.16, 1.84 respectively). High perceived workload was associated with age less than 40 years among the respondent (OR=1.92). High perceived workload and psychosocial risk factors were associated with the reports of WMSDs of the neck and low back among the respondents.

Conclusions: Ergonomic measures in preventing WMSDS among this occupational group should take into consideration not only physical risk factors but also psychosocial risk factors.

Influence of Intensity and Duration of Pain on Body Composition in Patients with Low Back Pain

Abiola O. Ogundele, Micheal O. Egwu, Chidozie E. Mbada

Purpose : This study assessed and compared body composition (Percent Body Fat (PBF), Lean Body Mass (LBM) and Percent Body Water (PBW)) in patients with Low Back Pain (LBP) and their age, sex and somatotype-matched healthy controls and also determined the relationship between intensity/duration of pain and each of PBF, LBM and PBW among the patient population.

Relevance: Low Back Pain is a major public health problem. Patients with LBP often report intolerance for physical activities. Studies have shown that pain leads to depression and reduced functional abilities in patients with LBP but its influence on body composition is not fully understood.

Methods: Two Hundred and two subjects comprising 101 patients (mean age 48.1 + 15years) and 101 healthy controls (mean age 47.8 + 15.18years) were purposively recruited into the study. Data were obtained on anthropometric (weight, height, hip and waist circumferences), body composition (PBF, LBM and PBW) and socio-demographic variables (age, sex and occupation) respectively. Perceived somatotype scale and wrist girth measure were used for somatotype matching of subjects. Visual Analogue Scale was used to rate pain intensity. Duration of pain was assessed in months as acute (< 3months) and chronic (> 3 months) pain.

Analysis: Data were analyzed using descriptive and inferential statistics. Alpha level was set at $p < 0.05$.

Results: The patients group had significantly higher Body Mass Index (BMI) than the controls ($p = 0.019$). However, there was no significant difference in body composition measures of PBF ($p = 0.24$), LBM ($p = 0.39$) and PBW ($p = 0.68$). Pain intensity was significantly and directly correlated with PBF ($r = 0.287$, $p = 0.004$) and inversely correlated with LBM ($r = - 0.280$, $p = 0.005$) and PBW ($r = - 0.256$, $p = 0.001$) respectively among the patients group.

Conclusion: Persons with LBP have significantly higher BMI than their age, sex and somatotype-matched controls. High pain intensity was directly correlated with high PBF among patients with LBP.

Implication: From this study, it is recommended that physical therapy management of LBP should not only focus on pain reduction but should include fat reduction program.

Keywords: *low back pain, body composition, somatotype.*

Funding: This study was unfunded.

Musculoskeletal Symptoms among Postmenopausal Women in Nigeria: Association with Overall and Central Abdominal Obesity

Omoyemi Olubunmi Ogwumike, Ade Fatai Adeniyi, Oluwakemi Oluwayemisi Orogbemi

Background: Menopausal women are known to experience musculoskeletal changes such as muscle atrophy, muscle weakness and osteoporosis- symptoms associated with advancing age coupled with depletion of the female sex hormone, estrogen. Since estrogen has an important role in maintenance of the integrity of musculoskeletal system and menopausal women have the tendency to gain weight at this stage of their life, it is worth investigating if any possible association will exist among musculoskeletal symptoms and overall and central abdominal obesity in postmenopausal women (PMW).

Objective: This study investigated prevalence of musculoskeletal pain in PMW, examined the association of overall and central abdominal obesity with complaints of musculoskeletal pain and the screening potential of obesity measures for risk of musculoskeletal problems among PMW.

Methodology: A cross sectional survey of PMW who were workers in government parastatals in south east local government area of Oyo-state, in Ibadan Nigeria. After receiving their informed consent, a self-developed questionnaire was administered to assess their socio-demographic characteristics. Standardized Nordic musculoskeletal questionnaire was used to assess 12-month prevalence of musculoskeletal symptoms while overall and central abdominal obesity were assessed using standardized measurement procedures including Body Mass Index (BMI), Waist Height Ratio (WHtR), Waist Circumference (WC) and Waist Hip Ratio (WHpR). Data was analysed using descriptive statistics of proportions and percentages, Chi-square and logistic regression models. Probability level was set at 0.05.

Results: A total of 310 PMW participated in the study, modal age group was (51-60) years, they were mostly married 262 (84.5%) and majority 220 (71%) belonged to low/middle income category. Highest prevalence of musculoskeletal symptoms were in the lower extremity 189 (60.97) and the back 164 (52.9) while majority were in the overweight 117(37.7%) and obese 125 (40.36%) categories when classified according to BMI. Chi- square analysis reflects an association between categories of BMI and neck/shoulder and lower extremity symptoms ($P<0.05$) of participants while categories of WHtR and WC shows association with back and lower extremity symptoms ($P<0.05$). Analysis through logistic regression models when participants were adjusted for age reveals that obese PMW were at greatest odds of reporting musculoskeletal complaints across various classes of obesity measures. WHtR reveals greatest odds (OR=1.7, 95% CI 1.07-2.75) and OR= 2.33, 95% CI 1.44-3.78) respectively for back pain and lower

extremity symptoms in participants. WHtR appears to be a better obesity screening tool for risk of musculoskeletal problems in PMW than BMI, WC and WHpR.

Conclusion: Musculoskeletal symptoms in the back and lower extremity were most prevalent in PMW. Overall and central abdominal obesity are directly associated with musculoskeletal symptoms and WHtR is the best obesity screening tool for risk of musculoskeletal symptoms in the PMW.

Implications for Practice: Prevention of obesity could be a very effective tool against prevention of musculoskeletal symptoms specifically, lower extremity and back pain problems in PMW. WHtR is the best obesity screening tool for musculoskeletal symptoms in PMW.

Depression, Pain and Physical Function in Patients with Osteoarthritis of the Knee: Implications for Interprofessional Care

Adesola Christiana Odole, Michael Ogunlana, Babatunde Adegoke, Faith Okenyi, Ushotanefe Useh

Background: Depression could be associated with pain and poor physical function of patients with knee osteoarthritis. It appears physiotherapists do not routinely screen patients with knee osteoarthritis for depressive symptoms. However in Nigeria, it is not sufficiently documented whether there is a relationship among pain, depression and physical function.

Objective: The aim of this study was to investigate the relationship among pain, depression and physical function in patients with knee osteoarthritis in selected public hospitals in Ibadan and establishing its implication for inter-professional care.

Methods: Twenty-three individuals had depressive symptoms out of 80 diagnosed with knee Osteoarthritis participated in the study. They were screened for depression using the mood/ depression assessment questionnaire. Depression, physical function and pain were assessed by Becks Depression Inventory, Ibadan Knee Hip Osteoarthritis Outcome Measure and Modified Visual Analogue Scale respectively. Statistical analyses were conducted using descriptive statistics, Pearson's correlation test and linear regression. Significance level was set at $P < 0.05$

Results: The screening for depression was positive in 28.8% of patients aged 62.69 ± 5.96 years. Most of the participants were females (87.0%) and married (95.7%). Pain intensity scores was 4.451.26 and physical function score was 152.4722.35. Depression score was 8.89 3.39. There were significant correlations between pain intensity and physical function ($r = -0.659$); pain intensity and depression ($r = 0.611$) and depression and physical function ($r = -0.660$). Negative linear relationship exist between physical function and each of pain ($R^2 = 0.434$), depression ($R^2 = 0.436$). A positive linear relationship exists between pain intensity and depression ($R^2 = 0.374$).

Conclusion: About a quarter of patients with knee osteoarthritis had depression. Individuals with knee osteoarthritis who had higher levels of pain were more depressed and had lower level of physical function. It is suggested that the assessment for and management of depression should be integrated into the health care of patients with knee osteoarthritis. Members of the health team involved in the management of osteoarthritis should be trained in the screening and detection of those who have depressive symptoms.

Prevalence of Pectoral Girdle Myalgia in Nigerian Women

Daniel Oluwafemi Odebiyi, Happiness A Aweto, Olumide A Gbadebo, Ayodeji A Oluwole, Ayoola I Aiyegbusi, Matthew OB Olaogun

Background: A brassiere is an article of clothing that covers, supports, and elevates the breasts, it comes in different sizes. Brassiere size has been associated with pectoral girdle myalgia (PGM).

Objectives of the study: To determine the prevalence of PGM in Nigerian women and investigated its association with brassiere size, number of children breastfed and working posture.

Methods: A total of 291 females (aged between 15 and 50 years) completed a 31-item closed-ended self-administered questionnaire, which was self-developed using a 6-man discussion group. It collected information on bio-data, prevalence of PGM and brassiere sizes as reported by the participants. The assumed actual brassiere sizes of the subjects were also measured by the investigators. Chi - Square was used to determine the association between occurrence of PGM and congruent versus incongruent brassiere sizes.

Results: History of PGM (in the last 12 months) among the 291 respondents was 45.4%. Contrary to findings in previous studies, the association between PGM and congruency of brassiere sizes was not significant (Chi-Square = 0.14, $p = 0.710$) in this study. There was a significant difference in the occurrence of PGM between the respondents who worked with elevated arm and those who did not. Fifty six (44%) of the respondents attributed pain to use of wrong brassiere size and 242 (87%) had relief after taking off their brassiere.

Conclusion: Pectoral girdle myalgia, although ignored, was common among the respondents. Also PGM was not associated with congruency of brassiere sizes in this study. However, we found a work-related item that had a significant association with the development of PGM. More studies are needed to further explore this finding.

Implications: Ruling out the possibility of PGM in the treatment of cervical pathology may enhance management and reduce treatment period.

The Effect of Spinal Mobilisations on Neuropathic Pain in People Living with Spinal Cord Injuries

Ilse du Plessis

Background and purpose: Neuropathic pain (NPP) is a major complication following spinal cord injury affecting all aspects of daily functioning. Limited effective treatment options exist and NPP relief has been identified as one of the highest areas of unmet needs of people living with spinal cord injury (PLWSCI). The purpose of this study was to determine whether spinal mobilisations are an effective treatment option for NPP in PLWSCI.

Methodology: A randomised pretest-posttest control trial was conducted, with twenty patients with SCI from the Tshwane rehabilitation centre.

Data collection: Data was collected by means of the DN4 questionnaire and a questionnaire comprising of patient demographics, SCI information and the VAS. An experimental group were treated with grade III spinal mobilisations to the thoracic or cervical area, and the control group had a placebo treatment. Pain was assessed immediately before and after treatment, and at five minutes, one hour and 24 hours after treatment.

Data analysis: A one-way ANOVA comparing the groups was applied per “time of pain assessment”, to determine whether there were significant differences between the mentioned groups at a 5% significance level. The longitudinal (over time) analysis of the effect of the mobilisations on pain was accomplished by a MANOVA using repeated measures.

Results: There was a significant reduction in pain levels immediately after intervention when compared to the control group, lasting for 5 minutes, where after pain levels slowly increased again.

Conclusion: SMT could be an effective treatment option for reducing NPP in PLWSCI. Further research needs to look at long term effects using longitudinal studies.

Keywords: *spinal cord injury, neuropathic pain, spinal mobilisations*

Effect of Stabilization Exercise on Fear Avoidance Belief of Patients with Non-Specific Chronic Low Back Pain

Ashiyat Kehinde Akodu, Sunday Rufus Akinbo, Daniel Oluwafemi Odebiyi, Suleiman Olaiwola Giwa

Background/Objective: Fear-avoidance beliefs (FAB) have been known to be one of the major causes of non-specific chronic low back pain which may also affect recovery if not investigated. However, studies on fear- avoidance beliefs among patients with non-specific chronic low back pain have not been well documented in Nigeria. This study sought to investigate the effect of stabilization exercise on fear avoidance belief of patients with non-specific chronic low back pain.

Material and Methods: A total of 122 individuals (44 males, 78 females) with non-specific chronic low pain back (NCLBP) participated in this study. They were recruited from Orthopaedic Clinic of Lagos University Teaching Hospital (LUTH), Idi- Araba, Lagos and National Orthopaedic Hospital Igbobi, Lagos, Nigeria. They were assigned to four different groups (1, 2, 3 & 4). Group 1 received stabilization exercise only. In addition to stabilization exercise, Groups 2 and 3 received Transcutaneous Electrical Nerve Stimulation (TENS), and massage therapy respectively. Group 4 was the control who received drug therapy only. Participants went through this protocol twice weekly for 8 consecutive weeks. Patients were assessed for fear avoidance belief using a structured 16 item questionnaire which assessed fear avoidance belief (FAB) for work and physical activity. The instrument has a cut-off score for FAB-physical activity and FAB-work activity which are >15 and > 34 respectively. Scores >15 and 34 shows high fear for physical and work activity respectively. Data were analysed using descriptive statistics of mean and standard deviation. Kruskal Wallis test was used to analyse the FAB for physical and work activity at baseline end of 4th week and end of 8th week. Wilcoxon test was used to compare baseline and 8th week values of the FAB for physical and work activity.

Result: Patients in three groups (1, 2 and 3) recorded significant improvement in fear avoidance belief for physical activity (FABP) and fear avoidance belief for work activity (FABW), following intervention ($P < 0.05$). Wilcoxon - test showed that there was significant difference between pre-and post-treatment intervention assessment within each of the groups except group 4 which is the control group. While the baseline score of the participant's for FABP in all the groups was higher than the cut-off point which is >15, while the baseline for FABW in all the groups was less than the cut-off point which is >34.

Conclusion: The study provides evidence that stabilization exercise only and in combination with TENS and massage is effective in managing fear avoidance belief of patients with non-specific chronic low back pain.

OUTCOME MEASURE

The Development and Psychometric Testing of a New Functional Measure for Children with Spina Bifida in Zambia

Margaret Mutale Mweshi

Background and purpose: Although valid and reliable outcome measures exist for evaluating the management of children with Spina Bifida (SB), most of them were validated for American children and are not easily applicable in developing countries. Consequently, outcomes of interventions given to children with SB in Zambia are not well known. Therefore, the current study set out to develop and evaluate the psychometric properties of a new measure titled, 'Zambia Spina Bifida Functional Measure' (ZSBFM) that can be used to evaluate the impact of the interventions in children with SB.

Methods: A retrospective study (2001-2010) was executed to identify functional domains of care that were considered essential in the management of children with SB and hydrocephalus. Subsequently, semi-structured interviews (n=20) and focus group discussions (n=20) of youths and parents/caregivers of children with SB were conducted for item generation.

Analysis and Results: Face and content validity (n=12), followed by item-content congruence evaluation (n=3) were carried out to validate the items. Test-retest (n=47) and inter-rater (n=40) assessments were then carried out to evaluate the stability of the measure. Consequently, exploratory factor analysis (EFA) (n=231) was conducted to examine the construct validity. The functional domains of care identified from the records of 1,400 children with SB and hydrocephalus were self-care, mobility and social function, and these led to the generation of 78 items. Face and content validity showed excellent internal consistency ($\alpha=0.99$), while the results of item-congruence exercise suggested removal of 1 item. The outcomes of the evaluations of both test-retest (n=47; $\alpha=0.99$; Intra-class Correlation Coefficient (ICC) range: 0.74 to 1.00) and inter-rater (n=40; $\alpha=0.99$; ICC range: 0.66 to 1.00) reliability showed that the developed measure has excellent internal consistency ($p < 0.05$). Considering the priori set for analysis with 0.65 as the minimum adopted ICC, 76 items (99%) had excellent reliability, while 1 item (1%) had good reliability during the test-retest evaluation. For the inter-rater study, 62 items (81%) had excellent reliability, 8 items (10%) good reliability and 7 items (9%) had poor reliability, and these were recommended for removal. Results of the EFA analyses using the Principle Axis Factoring on a 3-factor model showed that 9 factors were yielded. A total of 65 items were extracted, giving a retention rate of 93% from the 70-item research version. The factor loadings ranged from 0.514 to 0.938, 0.618 to 0.889 and 0.577 to 0.924 in self-care, mobility and social function respectively. The variance for each of the 3 respective domains accounted for 74.11%, 77.47% and

84.25%. The Cronbach's alpha of the 3 domains ranged from 0.969 to 0.974, indicative of excellent internal consistency. The internal consistency of the overall instrument ($n=231$; $\alpha=0.99$) was excellent ($p < 0.001$).

Conclusion: The ZSBFM demonstrated excellent reliability and construct validity. The measure is stable and can be used to evaluate the impact of interventions in children with SB aged 6 months to 5 years in Zambia, and possibly in some other sub-Saharan African countries. Future studies are recommended to test the measure for responsiveness to change and other forms of validity studies.

Value of Physiotherapy in Enhancing Basic Activities of Daily Living in HIV/AIDS Home Based Care Programmes

Billiat Chongo

Background: As people with HIV/AIDS live longer because of the life prolonging antiretroviral drugs, many of them struggle with activity limiting symptoms and subsequent disability. Limitations in the performance of basic activities of daily living among people living with HIV/AIDS have become a major concern for both the patients and their relatives. Although Home based care is a cost effective approach to managing HIV/AIDS through community care givers, services such as physiotherapy that add meaning to life have not been incorporated in most home based care packages. In Zambia both interventions and research have focused on prevention, drug and psychosocial management of HIV/AIDS and its related complications and symptoms. Rehabilitation services and specifically physiotherapy has not been incorporated in the care even though HIV/AIDS symptoms and impairments amenable to physiotherapy have been acknowledged.

Methods: A comparative, cross sectional study was undertaken to compare the performance of basic activities of living between participants from Physiotherapy in Palliative Care Programme where physiotherapy was incorporated and typical home based care under the Lusaka Archdiocese. Two equal random independent samples of 215 participants were selected. The International Classification of Functioning Disease and Health was used to measure the severity of symptoms and functional capacities. The main outcome measures were prevalence and severity of activity limiting symptoms, mobility capacity, performance of self care activities and overall performance of basic activities of living. The independent sample t test was used to determine whether there were significant differences in the outcome measures between the two groups of participants drawn from the two types of home based care programmes.

Results: It was found that there was no significant difference in the performance of basic activities of living between the two groups although participants from the physiotherapy incorporated programme were generally better than the typical home

based care programme. Participants from Physiotherapy in Palliative care programme had significantly severe activity limiting symptoms were significantly older and had been on home based care for significantly shorter period. They were significantly better at performance of self care activities but did not significantly differ with Archdioceses of Lusaka participants in mobility capacity.

Conclusion: There is some suggestion that physiotherapy could help in enhancing basic activities of living among people living with HIV/AIDS. This is suggested by the better performance of self-care activities among PPCP participants who on the other hand had significantly worse symptoms, were much older and yet were on HBC for a shorter period. The recruitment process and criteria were suspected to have influenced the outcomes measures. The Physiotherapy in Palliative Care Programme may have targeted patients with severe impairments and activity limitations. Incorporating physiotherapy in HIV/AIDS home based care programmes and the training of service providers could improve the performance of BADLs among people living with HIV/AIDS. There is however need to research further using matched samples or randomized clinical trials.

Key words; *activity limiting symptoms, basic activities of daily living, ICF, home based care, physiotherapy, rehabilitation, HIV/AIDS*

PAEDIATRICS

Experiences of Mothers of Children with Neural Tube Defects with Accessing Health Care Services

Micah Mutuna Simpamba, Prof. Patricia Struthers

Introduction: Many children born with NTDs in most African countries do not have easy access to specialised services such as paediatric neurosurgery because these are only available in larger hospitals (Ameh, 2003). The consequence is late presentation for surgery leading to high mortality rates and severe impairments for those who survive (Larareff, 2011; Ameh et al., 2001). The challenges faced by developing countries in surgical care could be explained using the access to care framework namely the “four A’s access to care theory” which has four dimensions namely availability, accessibility, affordability and acceptability.

Purpose: This study explored experiences of mothers of children with neural tube defects (NTDs) regarding accessing health care services.

Relevance: Attaining equity of access to health care services for children with NTDs in Zambia is not possible because surgical services for these children can only be found in Lusaka. This lack of access to essential health care services has been reported to be the major cause of early deaths and severe disabilities among children with NTDs in developing countries.

Participants: A sample of 20 mothers of children with NTDs who were admitted to the University Teaching Hospital was selected using purposeful sampling.

Methods: Qualitative methods were used and data was collected using face to face in-depth interviews. All interviews were audio-taped, transcribed verbatim and translated, with recurring ideas coded and collapsed into categories and themes.

Results: Experiences of mothers were summarised into five themes namely access to health care, transport, being a mother to a child with a NTD, family concerns and support. Transport to and from the national referral hospital was the main challenge.

Conclusion: Findings on access to health were related to the “four A’s” access theory which consists of four dimensions of access namely geographical accessibility, availability, affordability and acceptability.

Implications: Results from the study could be used to inform policy makers and health care providers on the challenges mothers face with accessing health care services for children with NTDs. This could potentially lead to improved service delivery for the affected children.

Key words: Access to health care.

NB: Please note that there is only one University Teaching Hospital in Zambia and it has no other name. NB: The theme "Being a mother to a child with a NTD" was included because as mothers narrated their experiences, they also narrated how they got to know about the child's condition, they also expressed their need for information about this condition and they wanted to know the future of their child. The theme "family concerns and support" was included because it represented mothers' experiences with families in relation to cultural beliefs (e.g. delayed access because family opted to use traditional remedies instead of going to hospital) and how those who got help or support from families, government or others found it easy to access the referral to hospital.

PRIMARY HEALTH CARE AND PUBLIC HEALTH ISSUES

Epidemiologic Features of Amputation in Kano State, North –West, Nigeria: A Five Year Retrospective Study.

Bashir Kaka, Omoyemi O Ogwumike, Omoyemi O Ogwumike, Idowu Opeyemi Ayodiipo, Idowu Opeyemi Ayodiipo, Atijosan Olagoke Jesuyemi, Atijosan Olagoke Jesuyemi, Abdulkadir Gwarzo Husaini, Abdulkadir Gwarzo Husaini

Purpose of the study: This is a hospitals base study that was carried out to determine the epidemiologic features of amputation in Kano State, North- West, Nigeria.

Relevance: Limb amputation is a major but preventable public health menace that is associated with enormous economic, social and psychological effects on patients and their families. However, there is limited data on the epidemiology of amputation in developing countries where the impact of amputation is more felt. And prosthetic services are poor.

Participants: Two hundred and ninety one (291) amputee's case files were used in the study the participant's ages ranged between (10 – 100) years

Methods: This was a retrospective study that examined all records of patients who underwent limb amputation in selected hospitals in Kano, between January, 2007 and December, 2011 for cause, age, gender and use of prosthetic device using a self-design proforma.

Analysis: Data was analyzed using descriptive statistic of frequency and percentages. All statistical analysis was performed using Statistical Package for Social Sciences (SPSS) for Windows (version 15).

Results: Two hundred and ninety one patients underwent amputation (197; 67.7%) were males and (94; 32.3%) were females. Overall, the commonest cause of amputation was Diabetes Mellitus complications (DM) (103; 35.4%) followed by complications of Traditional bone setting (TBS) (61; 21.0%) and Road Traffic Injuries (42; 14.4%) respectively. Lower limbs were more involved (200; 68.7%) than upper limbs (91; 31.3%). Above knee amputation was the most common procedure performed. Cases of amputation secondary to complications of DM maintained an upward rise over the years from 5 (5.4%) cases in 2007 to 29 (30.2%) in 2011.

Conclusions: Complications of diabetic foot ulcers and TBS were the most common indications for major limb amputation in our environment. The majority of these amputations are preventable by provision of health education, early presentation, referrals and appropriate management of the common indications.

Implications: The knowledge will help in public health education and proper rehabilitation of amputee's by physiotherapist

Key words: amputation, epidemiology, Kano

Funding source: None

Ethical approval: This research was approved by the Research Ethics Committee of Kano State Hospitals Management Board HMB/GEN/488

Patient Satisfaction with Rehabilitation Services at PPHC Level

Nondwe B Mlenzana, Jose M Frantz

Background: More than a decade ago, literature had highlighted that there is a need to understand the patients' view on service delivery and explore whether health professionals acknowledge patient views and make relevant adjustments. Recently, patient satisfaction was identified as a good indicator in measuring effectiveness of a health care service. Rehabilitation services are internationally recognised as one of the key components of health care. In South Africa, a Primary Health Care (PHC) approach was incorporated in health services since 1994. In South Africa the importance has been recognised as is evident in the current 2020 health plan. Causes of physical disability could be a direct complication of non-communicable diseases such as diabetes. Thus the aim of this study was to explore the satisfaction of people with physical disabilities regarding rehabilitation services at the selected rehabilitation centres in the Western Cape.

Methodology: This study employed a qualitative research approach using focus group discussions. The target population for this study involved all patients who presented with physical disabilities attending selected rehabilitation centres in the Western Cape, South Africa. A total of 43 patients were telephonically contacted to participate in this study and only 29 participants came for focus group discussions. Ethical clearance to conduct the study was obtained from the Ethics Committee of the University of the Western Cape (project registration number: 10/1/3) and the Western Cape Department of Health. Access to the patient information was obtained from the facility managers of the selected centres and written informed consent was obtained from all participants. All focus group discussions were tape-recorded after consent was obtained from the participants. During the focus group discussions the perceptions and satisfaction of patients regarding rehabilitation services were explored. The information obtained during the focus group discussions were transcribed verbatim by an independent person who did not take part in the data collection process.

Analysis: Thematic content analysis in the form of themes and categories was used for data analysis. Among the 29 participants, the mean age was 53 years with a range from

19 -78 years. Seventeen of the participants were female and 12 were male. The diagnosis of the participants included nine cerebrovascular accidents, nine neuromuscular disorders, six orthopaedic conditions like a fracture, three degenerative disorder like osteoarthritis and two lower limb amputations as a result of diabetes. Six main themes emerged which included initial reaction to the disability, patient's response to referral for rehabilitation, access to rehabilitation services, therapists interaction during rehabilitation, treatment sessions and equipment. Within each theme several categories and subcategories emerged.

Conclusion: The main conclusion drawn from this study is that patients were still dissatisfied with service providers regarding treatment sessions, waiting times and issuing of assistive devices. However, the patient outcomes of treatment were a positive aspect of rehabilitation services. Thus there continues to be a gap in the rehabilitation service delivery. Policy makers need to take the concerns of the patients into consideration so as to improve service delivery.

Knowledge, Attitude and Practice of Physiotherapists towards Health Promotion in Ghana

Hosea Boakye, Jonathan Quartey

Purpose: The purpose of the study was to determine the knowledge, attitude and practice of Physiotherapists towards health promotion in Ghana.

The objectives of the study were to determine the association between knowledge and attitude as well as the association between knowledge and practice of physiotherapists towards health promotion.

Relevance: Literature suggest that, health promotion is an important component of the health care delivery, as it has a profound role in improving the health of both supposedly healthy persons and individuals with impairments or those with various medical conditions. Its role in improving the health of such individuals depends not only in the knowledge of health promotion but also the attitude and practice thereof.

Participants: Ninety-one (91) out of the 121 physiotherapists registered with Ghana Physiotherapy Association who attended a General Meeting were recruited to take part in the study.

Methods: Questionnaires were given to physiotherapists recruited using a convenient sampling method and were retrieved the same day after completion. Participants who did not attend the meeting received their questionnaires via post or their personal e-mail addresses and were collected after two weeks using self-addressed envelopes provided by the investigators.

Analysis: The data were analyzed using SPSS version 20. Descriptive statistics of frequency distributions, pie charts and percentages were used to represent the data obtained and Chi-square analysis was used to test for associations at a significance level of $p < 0.05$.

Results: The highest response rate of 75 (82%) was from the age group 21-30 years. Of the 91 respondents, 43(47%) were males and 48 (53%) were females. Physiotherapists' knowledge, attitude and practice (KAP) were 72%, 84% and 87% respectively. The overall average KAP score was 81%.

The association between knowledge of physiotherapists and practice was significant with Pearson-chi-square (p-value as 0.013). The association between the physiotherapists' knowledge towards health and attitude was not significant with Pearson-chi-square (p-value as 0.097).

Conclusion: Physiotherapists had desirable knowledge, attitude and practice towards health promotion in Ghana. Nevertheless there is still room for improvement in acquiring in-depth knowledge about health promotion principles.

Implication: Refresher courses should be organized for the physiotherapists to broaden their knowledge in health promotion in order to practice health promotion appropriately and also more studies should be conducted to provide an evidence based approach in health promotion among physiotherapists in Ghana.

Key words: *health promotion, physiotherapist,*

Ethical issues: Ethical approval was sought and obtained from the Ethics and Protocol Review Committee of the School of Allied Health Sciences, College of Health Sciences, University of Ghana.

A Quantitative Study to Determine Involvement of Physiotherapy Practitioners in Physical Activities at Three Major Hospitals in Lusaka

Agness Chalwa Malu

Purpose: The study was aimed at determining the involvement of physiotherapy practitioners in Physical activities

Relevance: This study is of great relevance to the practice of Physiotherapy because this is one group in the medical profession who are experts in restoring movement potential. Once physiotherapists are able to manage their physical activities effortlessly, they will be well able to manage the clientele adequately with less stress while enjoying their work.

Participants / subjects: Thirty two Physiotherapy practitioners who were available at the time of data collection at UTH, ZIOH and LMGH with working experience of not less than 1 year both male and female, of age ranging from 22 to 65 years took part in this study. It was all inclusive study. Non-probability sampling was employed using convenience and purposive methods of sampling.

Methods: Non-interventional quantitative study. Data was collected using a self-administered questionnaire format as the International Physical Activity Questionnaire. A pilot study was done initially to assess the feasibility of the data collection tool at 2 randomly selected Health centers

Analysis: Statistical Package for Social Sciences (SPSS) 16.1

Result: Physiotherapy practitioners don't take an active role in planned exercises as 50% of the respondents who didn't engage in exercises believed that their work was adequate and did not need to take exercises. Parenting and gender reduced the level of physical activity involvement because 56% females engaged in nil exercise compared to 28.6% males. It was also established that respondents put in very little effort in attaining the expected physical activity 38% of the respondents could not account for time spent sitting; another 31% spent between 1 and 4 hours of sitting; while the other 31% spent more than 4 hours of sitting on a regular day.

Conclusion: The findings were that Physiotherapy practitioners at the selected hospitals in Lusaka know the importance of physical activities towards promotion of physically active lifestyles, but only 50% made efforts to participate in physical exercises. 50% of the respondents that did not participate in physical activities gave excuses of lack of time and so did not see the need of engaging in more physical activities other than their routine work which they felt was enough. Therefore the researcher concluded that the attitude of physiotherapists towards physical activities is poor.

Implications: The implication of inactive therapists makes it difficult for the clientele to adhere to the exercise prescription, as physiotherapists being movement champions of movement should also walk the talk. And is costing institutions lots on human resource as their in an increase to sick leave caused by stress related complications like back or neck.

Key words: physical, activity, lifestyle

Funding and Ethical clearance: This research was done on a small scale because it was self-sponsored.

Permission to conduct the study was sought from the University of Zambia Research Ethics Committee, and it was approved.

Nigerian Undergraduates' Knowledge, Attitude and Handling Practice of Accident Casualties

Chidozie Emmanuel Mbada, Ayokunle Oluwatosin Gbadamosi, Elkanah Ayodele Orimolade, Ajibola Babatunde Oladiran, Taofeek Oluwole Awotidebe, Tolulope Gideon Kehinde

Purpose: This study assessed knowledge, attitude and handling practice of accident casualties among Nigerian undergraduates.

Relevance: The increasing prevalence of Road Traffic Accidents (RTAs) and the consequent injuries and disabilities are a global health concern. However, informed knowledge and positive attitude are important factors in reducing post-accident injuries, human sufferings and economic tolls.

Participants: Four hundred and one (71.1% non-medical and medical 28.9%) undergraduate students of the Obafemi Awolowo University, Ile-Ife, Nigeria volunteered in this study yielding a response rate of 89.1%.

Methods: A previously validated questionnaire on knowledge, attitude and practice of accident casualties handling was used in this cross-sectional study.

Analysis: Descriptive statistics of mean, standard deviation and frequency were used to summarize data. Inferential statistic of Chi-square was used to test the associations between knowledge, attitude and practice of practice of accident casualties handling. Alpha level was set at $p < 0.05$.

Results: Only 22.7% of the respondents were trained in first aids. 50.1% of the respondents had witnessed at least an accident involving car to car collision (38.3%) and car to motor cycle collision (28.4%). 13.4% of the respondents reported a positive history of involvement in accidents, 74.6% were passers-by while 11.9% were standing-by at accident scene. Only 14.4% of the respondents had handled accident casualties. Lifting casualty to sitting was the most common practice (51.7%) among the accident handlers. Handlers at accident scenes were mostly concerned about their safety (41.3%). All respondents (100%) who had handled casualties at any time demonstrated positive attitude to handling casualties, however, more than half (69%) of the respondents had fair knowledge about accident casualty handling. 79.3% of the respondents who had handled accident casualties demonstrated incorrect practices.

Conclusions: Nigerian undergraduates demonstrated positive attitude but have limited knowledge about accident handling and lack appropriate skills in ensuring safety and prevention of further disabilities to casualties.

Implications: This study indicates an urgent need for training, enlightenment and education of the general populace in sub-Sahara Africa in casualty handling. It is

therefore suggested that learning on first aid and casualty handling be incorporated in schools curricula.

Non-Specific Chronic Low Back Pain and Self-Management in Rural Nigeria: A Qualitative Exploration of Beliefs, Experiences and Self-Management Practices.

Chinonso Nwamaka Igwesi-Chidobe, Isaac Sorinola, Emma Godfrey

Purpose: This study explored the health beliefs, experiences and self-management practices of adults living with non-specific chronic low back pain (CLBP) in a rural community in South-Eastern Nigeria. This was in order to identify potential biopsychosocial factors associated with CLBP to inform the development of a self-management programme for CLBP in rural Nigeria.

Relevance CLBP has a high prevalence of around 70% among rural Nigerian adults, with an associated vicious cyclical tendency of increasing disability, deepening poverty, reducing quality of life and reinforcing inequality in Nigeria. In addition, Nigerian rural dwellers have very limited access to Physiotherapy due to poor availability and unaffordable cost. Therefore, a physiotherapist-led self-management approach may be appropriate in this setting. In order to apply this to a rural African context, a pre-requisite is an in-depth understanding of the biopsychosocial factors associated with CLBP.

Participants A total of 30 participants with CLBP took part in this study. They were selected by purposive sampling using socio-demographic factors such as age, sex and occupation to reflect a diversity of circumstances and views. The majority were aged 40-49 years, of Pentecostal religion, married, with primary education and 43% were illiterate. All of them practiced peasant farming either full time or part-time.

Methods: Qualitative semi-structured face-to-face interviews were conducted in Igbo. The interview guide was based on the self-regulatory model of illness and explored health beliefs. It also included questions to assess perceived needs, socio-demographic characteristics and daily activities of the participants to contextualize the rural Nigerian community. Data saturation was reached after 30 interviews with participants. Pictures, field and reflective notes were taken to supplement the audio data.

Analysis Framework analysis using NVivo software is on-going following these steps: familiarisation, identifying a thematic framework, indexing, charting, and mapping and interpretation of data.

Results: Emergent themes from preliminary analysis include:

Social role as a perceived cause or consequence of CLBP Male participants associated CLBP with their occupation and blamed it for their inability to be intimate with their

wives. Female participants related CLBP to multiple children and parenting practices and blamed it on their inability to conceive.

CLBP is associated with perceived disadvantage, sense of loss and depression. Participants compared their social conditions less favourably with their urban counterparts and explained depression with feelings of tiredness, sadness and shame, as there is no equivalent word for depression in Igbo.

Feelings of helplessness and hopelessness. Participants' feelings of helplessness and hopelessness in the face of their CLBP resulted in their reliance on spiritual sources of support.

Subjective norms determined self-management practices. Participants' self-management practices were driven by perceived social pressure and cultural beliefs.

Conclusions: Biological, psychological and social factors are associated with CLBP in this context. Therefore, a quantitative study is being planned to determine the contribution of these factors to disability and quality of life in this rural African context.

Implications: Physiotherapy for CLBP in Africa should adopt a more biopsychosocial approach to replace the reductionist biomedical approach.

Keywords Qualitative, Back pain, Self-management Funding

Source/Acknowledgement: University of Nigeria/King's College London.

Continuum of Care in HIV: Navigating HIV as a Chronic and Episodic Disease

Hellen Myezwa

Description: It has been 30 years since the first HIV case was diagnosed. With the introduction and improved availability of highly active antiretroviral therapy (HAART) HIV has moved from being a terminal disease to a chronic and episodic illness. Co-morbidities resulting from HAART or aging with HIV may contribute to the increased disability experienced by people living with HIV/AIDS as well as a chronic and episodic pattern of morbidity. HIV thus causes disability but also affects people with disabilities. People with pre-existing disabilities and now living with HIV have faced a double burden of stigma. Physiotherapists have been involved in the chronic management of HIV and in the last decade have actively researched, using rehabilitation frameworks such as the ICF, to better understand management of HIV. The impact of HIV on the patient, caregiver/community, healthcare worker and the healthcare system has to be understood and managed in order for effective rehabilitation intervention and optimal quality of life to be realised.

Implications: Emerging evidence supports the increased involvement of physiotherapists in managing the co-morbidities and disability resulting from HIV infection and side effects of medication (Myezwa et al 2009). For example, physiotherapy interventions for neuropathic pain are necessary to restore function (Galantino, 2013, 1998, 1999). Exercise has the ability to enhance outcomes of cardiorespiratory fitness, strength, weight and body composition, and quality of life for people infected with HIV (O'Brien et al 2012, 2008). Other traditional and integrative approaches have been implemented with people living with HIV experiencing episodic disability (Galantino, 2005).

After three decades there is still no cure for HIV, research shows that any waning of efforts in prevention treatment and care results in an upsurge of the various points across the life span of the epidemic. Vigilance on the part of therapists (rehabilitation team) requires a review of the roles and the evidence available across the lifespan and within the continuum of care.

Physical Activity among Community Dwelling Individuals with Diabetes Mellitus: An Exploration of Challenges

Tania Steyl, Joliana Selma Phillips

Purpose: This study explored community dwelling individuals with diabetes mellitus experiences and or challenges with regards to the inclusion of physical activity in their management of their disease.

Relevance: The prevalence of diabetes mellitus in South Africa has increased drastically over the last two decades and ranks third in terms of mortality and morbidity for the general population. Urbanization plays an important role in the emergence and high prevalence rates of type 2 diabetes mellitus and is associated with more availability of food, eating of unhealthy fast foods and a less physical active lifestyle. Physical activity has gained much attention for its role in preventing premature disease and disability and it became widely recognized as a key health behaviour, associated with reduced morbidity and mortality of chronic diseases of lifestyle such as hypertension and type 2 diabetes, diabetic complications, improved glucose tolerance and insulin sensitivity. Various studies have been done in sub-Saharan Africa to investigate participation in physical activity and have shown the urban-rural discrepancies but most of these made use of self-reported information with questionnaires that are not validated for the population of the present study. Although quantitative studies, in the absence of others, give some indication of physical activity participation and patterns among individuals it provide little information regarding the individual, social and cultural factors underlying physical activity participation or the lack thereof.

Participants and Methods: Permission and ethical clearance for the study was obtained from the University of the Western Cape, South Africa (11/4/2) and the Western Cape Department of Health (RP59/2011). Thirty six clients were conveniently approached to participate in the study. Focus group discussions were conducted with 26 consenting individuals with diabetes mellitus from 6 randomly selected community health care centers in the Cape Metropolitan Region, Western Cape.

Analysis: Data from the audiotape recordings was transcribed verbatim by an independent person with experience in transcription to produce a manuscript. A comparison was made between notes taken during the discussions to verify accuracy. Content analysis was done by extracting meaningful ideas of the participants' opinions (coding into themes). Thereafter the transcripts were read through several times by the authors to look for emerging themes. Grouping of the themes into broader categories were done in order to fit small categories together. After the derivation of themes, an independent researcher read through the transcripts and generated themes that were then compared to the themes of the researcher.

Results: The discussions yielded five (5) main themes: safety/fear; lack of time/conflicting responsibilities; co-morbidities; lack of motivation/enjoyment and involvement of others.

Conclusion and Implications: Individuals with diabetes mellitus in urban communities experience several environmental and social facilitators and/or barriers to incorporating physical activity in their daily routines. Therefore when designing or promoting physical activity interventions for individuals with diabetes mellitus in urban communities it is important to create safe and supportive environments to enhance participation.

Key words: physical activity; diabetes mellitus; environmental/social factors

The Impact of Accessibility of Public Buildings and Spaces on Participation by Persons with Mobility Limitations in Zambia

Martha Banda-Chalwe, Jennifer C. Nitz, Desleigh de Jonge

Purpose: People with mobility limitations (PWML) face numerous challenges in the community as they strive to overcome barriers imposed by society such as inaccessible public buildings. This paper examined accessibility of the built environment and explored the impact of this on participation by PWML. The purpose of the study was to initiate a process for generating evidence that can be used to develop strategies and determine design elements for accessibility of the built environment in Zambia. The study will provide evidence for rehabilitation, disability and accessibility policy development.

Method: Firstly, explored the accessibility situation in Zambia through available literature. Seventy-five PWML were purposively selected from 5 out of 9 provinces in Zambia. Using nominal group technique participants identified public buildings and ranked them in order of importance to their day-to-day participation experiences. Secondly, utilising focus group discussions and personal interviews investigated how their capacity to participate in a preferred life style has been affected. Thirdly, explored the impact of accessibility of public buildings on participation by PWML via the Impact on Participation Autonomy Questionnaire (IPAQ).

Results: Descriptive analysis and reporting was utilised. Disability right to access has been addressed in developed countries such as the United States of America, the United Kingdom, Australia and South Africa. However, there has been limited disability research, lack of disability policies and systems, evaluation of disability rights and support from developed countries have been sighted as contributing to non-recognition of disability rights in Zambia including those relating to accessible built environment.

Government buildings, schools, higher learning institutions, businesses and service providers, religious buildings, health and recreational facilities, were identified as

inaccessible thereby denying autonomy in outdoor mobility, limiting and ceasing participation in a chosen lifestyle.

Outcome measures on the impact of inaccessibility on participation using the IPAQ showed 80-89% of PWML had poor to very poor chance of participating in opportunities such as visiting, going for holidays, outings, enjoyment and leisure. Eighty one to ninety one percent (81-91%) had poor to very poor chances of engaging in work and education. All participants (100%) recorded minor to severe problems in education and training participation domain.

Conclusion: Zambians with mobility limitations have been disadvantaged in accessing services and facilities depriving them of full and equitable life participation. It is recommended that ensuring Article 9 of the Convention on the Rights of Persons with Disabilities (CRPD) is an important component in the process to promoting and supporting disability rights in accessing services and facilities on equal basis.

Key words: Zambia, accessibility, built environment, persons with mobility limitations, participation, CRPD

Funding and Ethical clearance: The study was supported by the University of Queensland. Ethical clearance was sought and obtained for the Biomedical Research Ethics Committee of the University of Zambia and the Medical Research Ethics Committee of the University of Queensland, Australia

Prevalence of Hypertension and Stroke at Levy Mwanawasa General Hospital- Physiotherapy 2012 and Action Taken

Mary Sakala Mumba

Purpose: “The aim of this operational survey was to determine the prevalence of hypertension and strokes among clients attended to at LMGH-physiotherapy from January to December 2012. The secondary objective was to determine the awareness of hypertensive status among the stroke survivors and families before the stroke.

Participants: During the period under review physiotherapy department saw ninety nine (99) new stroke patients 57(57.8%) were female, 42(42.4%) were male. Left side paralysis were 45(45.4%) (25 female and 20male), 54 (54.6%) were right sided paralysis (32 female and 22 male),

The oldest client was female aged 83 and the youngest was also female aged 20, among the males the oldest client was 78years while the youngest was 27years.

Methods: Stroke Patients’ assessment forms were reviewed for information relevant to the survey and entered into a check list

Analysis: Simple mathematical calculations were done to come up with the proportions presented in the results

Results: Of the 56000 clients that came to LMGH outpatients department during the period under review, 42873 were first attendance while 12934 were re-attendances. 11629 were admitted 10629 were discharged and 860 died. According the hospital records, of 56000, 1687 were heart disease patients, 388 (22% of the cardiac patients) were hypertensive and one hundred (100) suffered strokes (26.8% of the registered hypertensive clients).

During the period under review physiotherapy department saw ninety nine (99) new stroke patients 57(57.8%) were female, 42(42.4%) were male. Left side paralysis were 45(45.4%) (25 female and 20male), 54 (54.6%) were right sided paralysis (32 female and 22male),

Both oldest and youngest clients were female, 83 and 20years respectively, the oldest male client was 78years and youngest was 27years. The subjective assessment of the 99 survivors noted that 50 (50.5%) were not aware of their hypertension status, 39(39.4%) claimed that they were not sick but had never checked their blood pressure while 10(10.1%) were aware but had very poor adherence to treatment.

Relevance of the information: This small operational survey is very relevant to health care providers so that measures could be put in place to prevent and manage hypertension. The findings of the survey led to the conception of the idea of screening of all clients and care givers in physiotherapy for hypertension and lifestyle counseling.

Conclusions: From the analysis of the available data the results indicate that 89(89.8%) of 99 were not aware of their hypertensive status hence the need for health care facilities to ACT and mitigate.

Implications: In a way the physiotherapy department has continued to contribute towards identification of hypertensive clients and sensitizing all, using the World Health and Allied Professionals lifestyle card. 547 hypertensive identified from January to September 2013; 107 strokes 19.6% compared to 26.8% previous year.

Key words: Hypertension, stroke, disability

Funding and Ethical clearance: This survey was operational which was not funded, ethical clearance was not necessary especially that it only involved reviewing patients' records but permission was sought from the institution to use hospital data.

Development and Reliability Testing of the Participation-Based Environment Accessibility Assessment Tool in Zambia

Martha Banda-Chalwe, Jennifer C. Nitz, Desleigh de Jonge

Purpose: Accessibility of the built environment can either facilitate or hinder full participation of people with disabilities. Non-communicable diseases such as cardiovascular diseases, diabetes, trauma and cancer requiring ambulatory devices contribute to the high prevalence of disabilities globally increasing the need for the built environment to be accessible. Firstly, this paper described the preliminary development of a potential measure for accessing the built environment in Zambia. Further, it examined the test-retest reliability of the Participation-Based Environment Accessibility Assessment Tool (P-BEAAT) checklist. The purpose was to identify the environmental features that present as barriers to participation for people with mobility limitations (PWML) using mobility devices such as wheelchairs or crutches. Evidence to be used to initiate a process of accessibility standards and rehabilitation policy development in Zambia.

Method: A cross sectional study with the P-BEAAT being developed through focus group discussions and personal interviews with 88 PWML from five out of nine provinces in Zambia regarding accessibility of the built environment. The content validity of the P-BEAAT checklist was accomplished through the three phases of development with data gathered from 11 focus groups and 9 personal interviews. The participants described accessibility barriers, which affect their participation in daily life. Twenty buildings considered important in daily life participation were identified by PWML who relied on wheelchairs or crutches for ambulation. The researcher, two research assistants, three local purposively recruited PWML audited the buildings.

Results: Information from the focus groups and personal interviews generated the P-BEAAT with 66 items describing eight environmental features with potential for identifying environmental barriers. The P-BEAAT has shown homogeneity with Cronbach's alpha of 0.91. Using the non-weighted multiple rater kappa examined intra and inter-rater agreement between the two assessments undertaken within two weeks apart. Intra-rater reliability achieved substantial agreement at ≥ 0.88 . Inter-rater reliability achieved almost perfect agreement at 0.89.

Conclusion: The P-BEAAT was constructed grounded in the reality of people's experiences in Zambia for use in assessing environmental features important in the daily life of PWML pertinent to developing countries. The P-BEAAT was shown to be a reliable tool for evaluating building access and special training in its use was not necessary.

Key word: P-BEAAT, built environment, mobility limitation, accessibility barriers, barriers to participation, Zambia

Funding and Ethical clearance: The study was supported by the University of Queensland. Ethical clearance was sought and obtained for the Biomedical Research Ethics Committee of the University of Zambia and the Medical Research Ethics Committee of the University of Queensland, Australia

SPORTS PHYSIOTHERAPY AND THERAPEUTIC EXERCISES

Pattern of Injuries among Ghanaian Basketball Players in Accra

Frederick Setordzor Davor; Jonathan Quartey²

Purpose: The purpose of this study was to identify the pattern of injuries among Ghanaian basketball players.

Relevance: Management of sport injuries is key in physiotherapy practice. Identifying and understanding the mechanism and pattern of injury in sports is a very important factor in the effective and efficient management and rehabilitation of sports injuries. There seems to be a paucity of literature about basketball injuries in Ghana which therefore raises issues about the documentation and management of such injuries when they occur. This invariably makes it difficult to develop proper injury prevention strategies to help minimize the occurrence of such injuries which in turn can affect the players' overall maximum performance.

Participants: The study involved all 273 male players of the division one and two basketball teams in Accra that were registered with the Greater Accra Basketball Association.

Methods: A standardized injury report form was used by the investigators to record the occurrence of injuries in this observational study. Records were taken during 2013 Greater Accra Basketball league season at their training sessions and during league matches.

Analysis: Z-test for two proportions was used to determine differences in the causes of injury, body part injured, type of injury, treatment received and player's level of recovery following an injury. All tests were two-tailed and interpreted significant at a p-value less than 0.05.

Result: A total of 75 injuries were recorded and the injury incidence was 0.190 and 0.084 per 100 participants during competition and training respectively. Tackling attempts (42.67%) was the most common causes of injuries followed by others (30.67%), (dribbling, landing from a jump, sudden stop and jumping) of the causes of injury recorded. Sprain (28%) was the most occurring injury recorded. Injuries to the knee (21.33%) were more than those to the ankle (17.33%). The difference between the knee and ankle injury was not significant ($P=0.532$). Out of the total injury recorded, (85.33%) did not receive any treatment.

Conclusion: Injuries to the knee were more than those to the ankle and majority of the injuries recorded had no treatment. Further studies should be undertaken to involve players of all basketball teams in Ghana to help develop a National injury profile and

also follow up on the number of day(s) loss in basketball participation following an injury.

Implication: Physiotherapist should educate players and coaches about injury prevention (especially about protective equipment) and subsequently about the need to prioritize injury treatment when they occur.

Key words: *pattern, injuries, rehabilitation*

Ethical Approval: Approval to conduct the study was sought and obtained from the School of Allied Health Sciences Ethics and Protocol Review Committee.

Funding Source: None

Knowledge and Perception of the Role of Physiotherapy Among Members of Hockey Teams in Accra

Nana Ama Siba Noamesi; Jonathan Quartey²

Purpose: This study aimed at establishing the knowledge and perception that exists about the role of physiotherapy in the game of hockey and management of injuries.

The objectives of the study were to determine perception and knowledge about injuries amenable to physiotherapy, modalities and equipment used in treatment.

Relevance: Various literature support that physiotherapy plays an important role in the prevention and management of sports injuries. It has been found that the patronage of physiotherapy services in hockey and even the most popular team sport in Ghana, football is low. Establishing the factors affecting the use of physiotherapy services in sports will hopefully contribute to increasing the patronage of physiotherapy and reduce the negative factors.

Participants: Fifty male and female field hockey players as well as 15 technical staff of 12 teams registered with the Greater Accra Hockey Association (GAHA) took part in the study.

Methods: Convenience sampling was used to recruit the participants and questionnaires distributed to them during training and match days at the National Hockey Pitch, Accra. Follow-ups were done weekly for four weeks on similar days to retrieve completed questionnaires.

Analysis: Data obtained was analysed using SPSS version 20.0. Bar charts, tables and percentages were used to represent data collected. Mann Whitney test was used for comparisons and Spearman correlation was used to test for associations.

Results: Majority of the participants identified ice (93.8%) and exercises (90.7%) as modalities used by physiotherapists. Joint (89%) and muscle pain (88%) as well as back pain (83%) were the injuries reported to be amenable to physiotherapy.

Majority of the participants believed that a doctor's referral is needed before seeing a physiotherapist. There was no significant association between knowledge, perception and number of years' experience for both players and technical staff.

Conclusion: Participants were found to have a good knowledge about the equipment, modalities and conditions amenable to physiotherapy. They also had a good perception of the role of physiotherapy in sports. However hockey players had greater knowledge compared to technical staff. Generally there were no physiotherapists attached to most of the hockey teams.

Implications: Other factors together with knowledge and perception existing on the role of physiotherapy in sports may contribute to the low patronage of physiotherapy services in Ghanaian sports. There is a need to increase awareness and education of sports personnel on the role of physiotherapy to enhance injury prevention and encourage appropriate early treatment after injuries.

Keywords: *Hockey, physiotherapy, knowledge, perception*

Ethical Issues: Ethical approval was sought and obtained from the Ethics and Protocol Review Committee, School of Allied Health Sciences, University of Ghana.

Funding Source: none

The Effect of Contract-Relax-Agonist-Contract (CRAC) Stretch of Hamstrings on Range and Sprint and Agility Performance in Moderately Active Males: A Randomised Control Trial

Theresa Burgess, Jennifer Jelsma, Timothy Vadachalam

Background: The high incidence of hamstring strain injuries in various sporting codes has been linked to reduced hamstring flexibility. Stretching has been used as the primary method to improve or maintain flexibility as a prophylactic prevention of muscle strains in many sporting codes. While a variety of stretching techniques exist, contract-relax-agonist-contract (CRAC) stretching, a type of proprioceptive neuromuscular facilitation stretching appears to induce greater flexibility improvements than other forms of stretching. However, the effectiveness of this stretch as a method of enhancing agility and sprint performance, as functional measures of athletic performance, has yet to be determined.

Objective: To determine the effect of hamstring contract-relax-agonist-contract stretch on flexibility, agility and sprint performance as functional measures of muscle performance in moderately active adult males.

Methods: Forty healthy male volunteers between the ages of 21 and 35 years, who performed between three and five hours of physical activity per week were recruited for this study, which had a true experimental design. Participants were randomly assigned to either an experimental group, which received the CRAC intervention, or the control group, which did not receive CRAC intervention. Participants attended a total of three testing sessions. During the first session, hamstring flexibility and sprint and agility times were measured. In the second session, pre- and post-CRAC hamstring flexibility was measured and the best of two timed trials was recorded for the sprint and agility tests. During the final testing session, pre-CRAC hamstring flexibility was recorded and following a standardised warm-up, post-CRAC hamstring flexibility was measured at specifically timed intervals (0, 2, 4, 6, 8, 15, and 20 minutes) on a randomly selected leg. A standardised warm-up was performed prior to the hamstring CRAC stretch in all testing sessions.

Results: There was a significant increased percentage change in hamstring flexibility of the experimental group, compared to the control group ($p < 0.001$). No significant differences were found in the percentage of change of agility, best 10 m or best 25 m sprint times between groups. There was a significant difference between groups with repeated flexibility measurements conducted over regularly timed intervals ($F(7, 266) = 38.95$; $p < 0.001$). Hamstring flexibility remained significantly increased for a duration of 8 minutes in the experimental group post-CRAC stretch, compared to the control group ($p < 0.001$). There were no significant differences between the knee extension angles of the “thixotropic” and “control” leg in the experimental and control groups at the 20 minute interval when compared to baseline knee extension angles within each group.

Conclusion: Hamstring flexibility was significantly increased for up to 8 minutes following the CRAC stretch. However, the CRAC stretch was ineffective in enhancing agility and sprint performance. There should be a standardised protocol of CRAC application, and future studies should determine the effects of chronic stretch adaptations following regular, long-term hamstring CRAC application on measures of exercise performance. This study showed that CRAC is an effective, time-efficient method of stretching that does not have a detrimental effect on exercise performance.

CLINICAL RESEARCH

Satisfaction of Stroke Survivors with Physiotherapy care in Ibadan, Nigeria

Olubukola A. OLALEYE *Ph.D*, Marvellous A. Akinrinsade

Purpose: Patients' satisfaction with care is a measure of the quality of healthcare services received and a predictor of their adherence to treatment schedule as well as compliance with recommended regime. The importance of understanding factors associated with satisfaction of stroke survivors with outpatient physiotherapy services necessitated this study.

Relevance: Patients receiving physiotherapy care, like other health services, tend to demand value-for-money-and-time now more than ever from their health providers. Hence it is pertinent to examine post-stroke individuals' satisfaction with physiotherapy. This is with a view of improving the quality of services being received by the patients.

Participants: Sixty stroke survivors who were not aphasic and had no cognitive impairments were recruited for the study.

Methods: A mixed methods technique using qualitative and quantitative data was used. Quantitative data was collected using a socio-demographic questionnaire, the Physical Therapy Outpatient Satisfaction Survey - European version (EPTOPS) and the Modified Motor Assessment Scale (MMAS) to collect socio-demographic data, measure satisfaction and functional ability respectively. Qualitative data was collected using open-ended focus guide in a Focus Group Discussion with stroke survivors. The questions focused on the participants' perception of stroke and its causes, importance of physiotherapy in their care and satisfaction with physiotherapy services. Questions on satisfaction examined factors relating to satisfaction with care received, relationship with physiotherapists and what can be done to improve satisfaction.

Analysis: Data was summarized using descriptive statistics of mean, frequency percentages and analyzed using Pearsons' correlation and Spearman's correlation coefficients at $p = 0.05$. Qualitative data consisted of the professionally transcribed recorded discussion. The themes that emerged were cost of physiotherapy, relationship with physiotherapist, continuity of care, inadequate personnel and waiting time.

Results: 60 stroke survivors (30 male and 30 females; mean age of 61.70 ± 11.59 years) participated in quantitative aspect, while 4 (2 males and 2 females) participated in the qualitative study. Majority of the participants (91.7%) reported good improvement with physiotherapy. There was no significant association between satisfaction and socio-

demographics ($p > 0.05$); and between satisfaction and motor ability ($p = 0.41$). Qualitative data was grouped under the four domains of the EPTOPS. Enhancers included the themes continuity of care, relationship with personnel; location included proximity of physiotherapy facility to patients' homes, ease of transportation; detractors were increased waiting time, inadequacy of personnel and equipment while cost was the economic cost of physiotherapy.

Conclusion: There is an overall satisfaction with physiotherapy among Nigerian stroke survivors, due largely to physiotherapists' skill and relationship with patients. However, a major identified detractor from satisfaction was a lack of continuity of care among Physiotherapists.

Implication: There is need to challenge the structure of care and make provision for continuity of care. Patients who receive treatment from only one physiotherapist during the entire period of intervention may likely be more fully satisfied with care than those receiving care from different physiotherapists.

Keywords: Satisfaction with care, Stroke Survivors, Continuity of care, Physiotherapy

Funding: This study was not funded.

Ethical Approval: This study was approved by the University of Ibadan/University College Hospital Ethics Committee (UI EC/13/0149).

Effect of a 6-Week Telephone-Based Physiotherapy Intervention on Pain Intensity and Physical Function of Patients with Knee Osteoarthritis

Adesola C. Odole, Oluwatobi D. Ojo

Background: Knee osteoarthritis (OA) results in persistent pain and limited physical functioning. Tele-physiotherapy, which involves the use of telecommunications technology as a medium for therapeutic care appears not to have been explored among patients with knee OA.

Aim: This study was carried out to investigate the effect of a 6-week telephone-based physiotherapy intervention on pain intensity and physical function of patients with knee OA.

Methodology: Fifty patients with knee OA were randomly assigned using a computer generated table of random numbers equally into two treatment groups; Clinic Group (CG) and Telephone-based physiotherapy Group (TG). The CG received thrice-weekly physiotherapist administered osteoarthritis-specific exercises in the clinic for six weeks while the TG received structured telephone monitoring with self-administered osteoarthritis-specific exercises thrice-weekly for six weeks at home. Participants' pain

intensity and physical function were assessed using Visual Analogue Scale and Ibadan Knee Hip Osteoarthritis Outcome Measure respectively. Assessments were done at baseline, second, fourth and sixth week of intervention by blinded-physiotherapist assessors. Data were analyzed using Independent t-test and ANOVA.

Results: The mean ages of CG (54.96 ± 7.81 years) and TG (56.04 ± 7.40 years) were not significantly different. Within group comparison showed significant improvements ($p < 0.05$) across baseline, 2nd, 4th and 6th week of intervention in TG and CG's pain intensity and physical function. Between-groups comparison of CG and TG's pain intensity and physical function at baseline, 2nd, 4th and 6th weeks showed no significant differences ($p > 0.05$).

Conclusion: Six-week tele-physiotherapy reduced pain and improved physical function in patients with knee OA, comparable to clinic based treatment.

Implication: Tele-physiotherapy should be incorporated into the rehabilitation programme of patients with knee OA. This mode of therapeutic intervention in patients with knee OA would undoubtedly reduce clinic visits, clinic waiting time, and cost incurred on transportation to the clinic, especially for patients living at distant places from physiotherapy clinics.

Key words: Tele-physiotherapy, Osteoarthritis, Pain, Physical function.

Funding: This study was not funded by any organization or institution

Pain Assessment as an Outcome Measure for Physiotherapy Intervention in Children with Cerebral Palsy

Ajediran I. Bello (Ph.D), Naa Abokailey Mensah (B.Sc)

Purpose: The purpose of this study was to assess pain perception among children with Cerebral Palsy (CP) during 8-week physiotherapy intervention taking into consideration the frequency and number of treatment sessions. The main objective was to quantify the impacts of physiotherapy on musculoskeletal pain in children with CP.

Relevance: The outcome of this study is expected to provide an insight for quantifying physiotherapy impacts in the management of pain associated with CP. This could become handy during objective assessment and for monitoring pain perception in children with CP.

Participants: The participants for this study were 30 children with CP comprising 16 (53.3%) males and 14 (46.7%) females with age range 8 months to 11 years. Participants were grouped under the following age categories: 0-2 years, 3-5 years, 6-8 years and 9 -11 years. They were enrolled into the study at the out-patient units of physiotherapy departments at three referral Hospitals in Accra, Ghana.

Methods: Ethical approval for the study was obtained from the Ethics and Protocol Review Committee of the School of Allied Health Sciences, University of Ghana. Participants were recruited into the study through sample of convenience method. It is an observational study in which children with CP were managed by highly experienced pediatrics physiotherapists who had undergone series of training courses in Bobath and PNF techniques. Paediatrics Pain Profile (PPP) questionnaire was utilized to assess pain behaviour of the children. The questionnaire was administered to the mothers or caregivers of the participants on the first contact (baseline assessment). The mothers or parents were required to respond to the information regarding the pain behaviours of their children as indicated in the questionnaire. Subsequent follow up pain assessments were performed in the fourth and eighth week of the intervention period. The frequency and number of treatment sessions were recorded over eight weeks whilst the type of CP was retrieved from the patients' folders.

Analysis: Data were analyzed using means, standard deviation and percentage to present the data. Related samples Wilcoxon Signed Rank test was used to compare pain perception among the participants at baseline and at week eight whilst Spearman's Correlation Coefficient analysis was performed to determine the relationships among the intervening variables. The probability level of statistical significance was set at 0.05.

Results: Majority of the participants, 22(73.3%) presented with Spastic CP whilst 1(3.3%) had Ataxic CP. There was a significant reduction in pain perception between the baseline and week 8 scores. A significant correlation ($p < 0.001$) was also found between pain perception and the types of CP presented. Pain perception and frequency of physiotherapy per week were inversely and insignificantly correlated ($r = -0.147$, $p = 0.437$). Similarly, pain perception and number of physiotherapy sessions were not significantly correlated ($r = -0.046$, $p = 0.808$).

Conclusion: 8-week physiotherapy had an impact on the pain perception in children with CP and this was not significantly influenced by the frequency and the number of physiotherapy sessions.

Implication: The outcome has policy implication in physiotherapy practice which could be considered in practice guideline development for physiotherapists in the management of children with CP.

Key words: cerebral palsy, pain perception, physiotherapy, pain assessment.

Predicting the Critical Point for the Onset of Diabetic Foot Ulcer Using the Modified Velocity Field Diagram

Sam Chidi Ibeneme

Purpose: Detailed analysis of the gaits of diabetic patients may have the potential of identifying risk predictors with diagnostic utility in high-risk patients, and therefore, lead to interventions that could effectively prevent lower extremity amputation arising from diabetic foot ulcer and gangrene.

Relevance: Identification of high-risk patients prone to foot ulceration, and targeting intervention to arrest the pathophysiological processes could lower the morbidity and mortality rate in this populace.

Participants/Subjects: Eighty (20 normal, 20 diabetic, 20 diabetics with peripheral neuropathy and 20 diabetics with foot ulcer) subjects were recruited from the University of Nigeria Teaching hospital and other peripheral hospitals, using convenience sampling technique. Their mean age was given as 42.09 ± 10.22 years, $51-88 \pm 11.50$ years, 43.83 ± 9.26 years and 44.00 ± 8.25 years respectively

Method: - This study utilized a case-control research design. Gait analysis and evaluation was done with subjects ambulating on a plain walkway, 10 metres long, in a remote hospital building, at five self-selected speeds varying from very slow to very fast walking speeds. The mean of two trials was recorded. The mean quantitative gait values of step length and time were obtained and used to calculate the velocity (V), stride length (L), stride frequency (F), stance (ST), swing (SW) and double-support (DS) phases of stride. These were adapted to form the modified velocity field diagram (MVFD). From the MVFD, the load coefficient was determined as the slope of the loading zone and used to calculate the load (weight of the body) transferred to the forefoot (F) and rearfoot (R) during walking, and subsequently, the forefoot-rearfoot (F/R) load ratio. ANOVA test was used to analyze parametrically distributed data. All tests will two one tailed, with alpha set at 0.05.

Results: - F/R load distribution ratio of 1, 2 and 3, was obtained in the loading zone of the MVFD, for normal subjects/subjects with diabetes, diabetic patients with peripheral neuropathy, and subjects with diabetic foot ulcers, respectively. These load ratios were obtained at a gait efficiency region (GER) of 1.89 velots, 2.25 velots, 2.5 velots and 3.32 velots, respectively.

Conclusions: These results indicate the possibility that a load imbalance between the forefoot and rearfoot was responsible for the diabetic foot ulcer in the affected subjects, hence a F/R ratio of 3. In contrast, a balance in the load distribution was obvious in normal and diabetic subjects, hence a F/R ratio of 1. Thus, for a F/R load ratio of 2 to be

recorded in subjects with peripheral neuropathy suggests a forefoot/rearfoot load imbalance whose magnitude is not enough to precipitate foot ulcer. Therefore, it is predicted that foot ulcers in diabetic patients will be precipitated at a F/R load ratio > 2 and a GER > 2.5 velots.

Implications: Early detection of diabetic patients at the risk of ulceration before it occurs can help target intervention to prevent its occurrence since it is also amenable to Physiotherapy intervention through load redistribution. Invariably, it emphasizes the relevance/indispensible role of Physiotherapy in providing care for diabetic patients

Keywords: forefoot-rearfoot load imbalance, diabetic foot ulcer, modified velocity field diagram

Joint Predictability of Physical Activity and Bodyweight on Health-Related Quality of Life among Nigerian Type 2 Diabetes

Olufemi Oyeleye Oyewole, Kolawole Sunday Oritogun, Akolade Olukorede Idowu, Olatunde Odusan

Purpose: The study was undertaken to investigate the impact of physical activity (PA) and body weight on health-related quality of life (HRQoL) among type 2 diabetes mellitus (T2DM) attending a tertiary health facility in south-west Nigeria.

Relevance: Despite numerous health benefits of PA, its promotion is often inadequate and majority of this population do not become or remain regularly active. This study provides additional evidence of importance of regular PA.

Participants: Consecutive sample of 119 participants with mean age (61.8 ± 11.8 years) were selected. They included 47 men (39.5%) and 72 women (60.5%).

Methods: A cross-section of the participants' PA were assessed using long form of International Physical Activity Questionnaire (IPAQ) and were categorized as physically active or inactive. Their quality of life was assessed with health survey Short Form 36 (SF-36) questionnaire. Standard methods were used to assess their body weight and height.

Analysis: Data was analysed using descriptive statistics of mean, standard deviation, frequency and percentages and inferential statistics of t-test, Pearson's correlation and regression where applicable.

Results: About 62% of the participants were overweight or obese while 69% were physically active and 31% inactive. There was sex difference in body mass index (BMI) but not in physical activity. Role limitation physical and role limitation emotional were most affected domains of HRQoL. The HRQoL of physically active were significantly higher than those of physically inactive participants in all domains except pain domain.

The HRQoL of obese participants were lower than overweight participants but only significant for pain domain. Physical activity (Met Minute/week) was significantly correlated with all domains of HRQoL with exception of emotional wellbeing and pain domains. Regression analysis revealed that physical activity remains a significant predictor of physical composite summary ($R^2=0.16$; $p<0.001$), physical functioning ($R^2=0.21$; $p<0.001$), role limitation physical ($R^2=0.14$; $p<0.001$), general health ($R^2=0.13$; $p<0.01$), mental composite summary ($R^2=0.13$; $p<0.01$), role limitation emotional ($R^2=0.11$; $p<0.01$) and emotional well-being ($R^2=0.09$; $p<0.05$) when controlling for age, sex and BMI.

Conclusions: High level of physical activity improves HRQoL while increased body mass index decreases it. Future studies should compare normal population with T2DM.

Implications: With the positive influence of high physical activity on HRQoL, the Physiotherapist should encourage people with T2DM to be involved in regular PA through individualized education, proper counselling and periodic feedback.

Key words: physical activity, bodyweight, health-related quality of life

Risk Factors for Non-Communicable Diseases in Wheelchair-Dependent People with Spinal Cord Injury Living in the City of Tshwane: A Cross-Sectional Study

Izaan de Jager, Joyce Mothabeng, Piet J Becker

Purpose: The aim of the study is to investigate and describe the potential risk factors for non-communicable diseases (NCDs) for wheelchair-dependent people with spinal cord injuries (SCI) living in the Tshwane metropolitan for six months or more after being discharged from rehabilitation centres.

Relevance: Non-communicable diseases are the leading cause of the death and disability worldwide, posing a real health risk internationally and in South Africa (WHO, 2011). The physiological changes caused by SCI and the sedentary lifestyle of people with spinal cord injuries (PWSCI) put them at higher risk of developing NCDs. The problem of NCDs in PWSCI has not been investigated enough to determine the need for a management programme, including prevention strategies to be put in place. Hence the need for this survey of NCD risk factors in PWSCI.

Participants: The study population will consist of wheelchair-dependent PWSCI living in the community of Tshwane metropolitan who have been discharged for six months or more from rehabilitation centres.

Methods: An exploratory cross-sectional epidemiological survey will be conducted. The potential risk factors will be determined from demographic information, behavioural,

physical and biochemical measurements using the World Health Organisation STEPwise approach to chronic disease risk factor surveillance.

Analysis: Data analysis will employ descriptive and correlation statistics. The prevalence will be determined as the proportion of the sample presenting with risk factors and expressed as a percentage. The association between the outcomes, i.e. a NCD, present/absent, and the main factors will be assessed with multivariate logistic regression analysis. The primary statistics to be reported will be the odds ratios along with 95% confidence intervals. Final testing will be done at the 0.05 level of significance.

Conclusion and Implication: Prevention is the key in the management of NDCs and early identification of potential risk factors will contribute towards preventing PWSCI from getting the NCDs. This study will add to the knowledge base from which further research questions can be asked and additional studies can be conducted.

The Effects of Progressive Goal Attainment Programme and Standard Treatment on Selected Treatment Outcomes in Patients Presenting with Mechanical Low Back Pain: Preliminary Reports

Michael Opeoluwa Ogunlana, Adesola Christiana Odole, Adebayo Adejumo

Background: Mechanical Low Back Pain (MLBP) is a physical problem that may be influenced by psychosocial variables like fear-avoidance beliefs, catastrophic thinking and perceived disability. Progressive Goal Attainment Programme (PGAP) is an activity based on psychosocial intervention that can be administered by physiotherapists. Evidence from literature suggests that PGAP may improve rehabilitation outcomes for individuals with chronic MLBP but its efficacy has not been evaluated in acute and sub-acute MLBP patients. Hence, this study was carried out to investigate the effects of PGAP as an adjuvant to standard treatment on selected pain and psychosocial characteristics in patients with MLBP. The pilot study was anchored on the Bio-psychomotor theory of pain.

Methodology: Twelve consecutively selected individuals (10 females; 2 males) newly diagnosed of MLBP participated in this experimental design. Participants were randomly assigned into experimental group (EG) and control group (CG). Both groups received the standard treatment for MLBP while the EG received PGAP in addition. Participants pain intensity, pain catastrophising, kinesiophobia, perceived disability and self-efficacy were assessed using Quadruple Visual Analogue Scale (QVAS), Pain Catastrophising Scale (PCS), Tampa Scale for kinesiophobia (TSK), Revised Oswestry Disability Questionnaire (RODQ) and Self Efficacy in rehabilitation Scale (SES) respectively. Assessment was carried out at baseline, end of 5th and 10th week of treatment. Data was analyzed using the descriptive statistics of mean, standard deviation and

percentages. Inferential Statistics of Mann-Whitney U and Friedmann ANOVA was used with level of significance set at $p=0.05$.

Results: Participants (EG= 4 Females; 2 males; CG=6 females) were aged 42.0 ± 7.51 years. The EG and CG were comparable in weight (77.33 ± 15.03 kg; 72.50 ± 4.04 kg), height (1.66 ± 0.14 m; 1.58 ± 0.02 m) and age (40.67 ± 10.33 years; 43.3 ± 3.61 years) at baseline. At baseline, the mean scores of pain intensity (9.33 ± 1.03 ; 9.00 ± 0.89); PCS (30.67 ± 10.44 ; 27.67 ± 9.97), TSK (39.67 ± 5.47 ; 42.67 ± 1.86); RODQ (63.33 ± 12.69 ; 58.67 ± 9.00) for EG and CG respectively were not significantly different. SES (100.00 ± 12.43 ; 70.00 ± 24.12) for EG and CG respectively was significantly different at baseline. Between group comparison at the end of the 10th week revealed that the mean scores of pain intensity (4.33 ± 2.68 ; 7.67 ± 2.23), PCS (13.67 ± 9.85 ; 25.00 ± 14.06); RODQ (53.33 ± 10.33 ; 54.67 ± 10.33) for EG and CG respectively were not significantly different. At the end of 10th week, EG had significant reduction in mean scores for TSK (34.67 ± 3.72 ; 42.00 ± 2.68) than the CG. The EG had significant increase in SES (111.67 ± 4.03 ; 72.00 ± 26.03) than the CG at the end of the 10 weeks intervention period. Within group comparison showed significant decrease in EG's mean score for pain intensity ($P=0.07$) and TSK ($P=0.009$) over the 10th week intervention period.

Conclusion: The outcome of this pilot study revealed that Progressive Goal Attainment Programme is a promising intervention to augment standard treatment in patients with Mechanical Low Back Pain. Progressive Goal Attainment Programme could be incorporated into treatment for these individuals.

Influence of Dominant Body Somatotype and Sex Difference on Q-Angle and Some Selected Skeletal Measures of Young Adults in South-Eastern Nigeria.

Ibikunle, P.O, Onwuakagba, I.U, Useh U.

All correspondence to: Dr P.O Ibikunle. (PT, PhD), Northwest University, Mafikeng Campus. South Africa, 25405314@nwu.ac.za, po.ibikunle@unizik.edu.ng

Objectives: The body somatotype is defined as the quantification of the present shape and composition of the human body. The body somatotype is expressed in a three-number rating representing endomorphy, mesomorphy and ectomorphy components respectively, always in the same order. Endomorphy is the relative fatness; mesomorphy is the relative musculoskeletal robustness; and ectomorphy is the relative slenderness of a physique. The purpose of the study was to investigate the influence of dominant body somatotype on the Q-angle and selected skeletal measures (hip width and femur length) of male and female undergraduates of a Southeastern Nigeria University.

Method: Ethical approval was obtained from the University ethical committee to carryout the study. A total of 250 young adults (125males and 125females) aged between 18 – 30 years participated in this cross sectional study. The Heath-Carter Anthropometric Body Somatotyping method was used to measure the body somatotype of each of the participant. A Goniometer was used to measure the Q- angle and a flexible tape was used to measure the hip width and femur length of each of the participant. Data was summarized using mean, standard deviation, frequency and percentages; and analyzed using of student's T- test, ANOVA and Pearson Correlation at alpha level of 0.05.

Result: The mean age of the male participants was 22.61 ± 2.56 and that of the female participants was 21.92 ± 2.61 . The result shows that the most prevalent dominant body somatotype in males and females were found to be mesomorphy. The most prevalent dominant body somatotype in all the participants was found to be mesomorphy. The mean hip width of the male and female participants was found to be $41.45\text{cm} \pm 4.06$ and $43.07\text{cm} \pm 5.67$. The mean right and left femur length of the male and female participants were found to be $45.10\text{cm} \pm 4.06$ and $45.20\text{cm} \pm 4.10$, $42.52\text{cm} \pm 4.38$ and $42.42\text{cm} \pm 4.29$ respectively. The mean Q- angle value of the male and female participants were found to be $16.73^\circ \pm 4.00$ on the right and $16.94^\circ \pm 3.87$ on the left; and $18.04^\circ \pm 3.83$ on the right and $17.86^\circ \pm 4.06$ on the left, respectively.

There was significant differences ($p < 0.05$) in the values of Hip width, femur length and Q-angle among males and females in all the dominant body somatotypes respectively. There was significant relationship ($p = 0.02, 0.00$) in the values of Q angle and hip width between male and female participants with endomorphic body somatotype, significant relationship ($p = 0.04, 0.03$) in the value of Femur length and Q angle between male and female participants with mesomorphic body somatotype and also in the Hip width and femur length of male and female participants who are mesomorphs ($p = 0.01, 0.04$).

Conclusion: The result of the study showed that each dominant body somatotype has different values for Q- angle, hip width and femur length and that sex Differences may have influence on their values.

Key words: *body somatotype, Q- angle, hip width, femur length, Heath-Carte*

Appendix 1: Abstracts Reviewers

- | | |
|-----------------------------------|----------------------------------|
| 1. Abaraogu, Ukachukwu Okoroafor | 23. Kehinde, Ashiyat Akodu |
| 2. Adegoke, Babatunde Olusola | 24. Kibet, Joanne Jepkemoi |
| 3. Akinfeleye, Adegoke Moyinoluwa | 25. Maleka, Morake Douglas |
| 4. Akinpelu, Aderonke | 26. Mothabeng, Joyce Diphale |
| 5. Akinremi, Ayodele Akintunde | 27. Mumba, Mary Seliya |
| 6. Amusat, Nurudeen | 28. Mweshi, Margaret Mutale |
| 7. Anthea, Joy Rhoda | 29. Nankwanga, Annet N/A |
| 8. Anulika, Aweto Happiness | 30. Nkandu, Esther Munalula |
| 9. Banda-Chalwe, Martha | 31. Ntsiea, Mokgobadibe Veronica |
| 10. Bello, Ajediran Idowu | 32. Nuhu, Jibril Mohammed |
| 11. Birabi, Bridget Nwanne | 33. Odole, Adesola |
| 12. Chandrasekaran, Baskaran | 34. Okafor, Chris Udoka |
| 13. Chigali, George M. | 35. Oke, Kayode Israel |
| 14. Cochrane, Maria Elizabeth | 36. Quartey, Jonathan |
| 15. Comley-White, Nicolette | 37. Robinson, Deirdre Eileen |
| 16. Gbiri, Caleb Ademola | 38. Sangoseni, Olaide |
| 17. Godhrawala, Hamza Najamuddin | 39. Stewart, Aimee Vivienne |
| 18. Godlwana, Lonwabo Lungile | 40. Swaminathan, Narasimman |
| 19. Henschke, Nicholas | 41. Umunnah, Joseph Onuwa |
| 20. Ibeneme, Sam Chidi | 42. Useh, Ushotanefe |
| 21. John, Emmanuel B. | 43. Zutshi, Kalpana |
| 22. Kaka, Bashir | |

Appendix 2: List of Congress Attendees

NO.	NAME	COUNTRY
1.	Capo Chichi Martial	Benin
2.	Shaun Cleaver	Canada/Zambia
3.	Chanthal Y. Sikabwe	Democratic Republic of Congo
4.	Jack Kamana	Democratic Republic of Congo
5.	Kazadi Tshibanda Madine	Democratic Republic of Congo
6.	Odia Mwamba Nana	Democratic Republic of Congo
7.	Ajediran I. Bello	Ghana
8.	Daniel Nymongu	Kenya
9.	Daniel Nymongu	Kenya
10.	Dickson Okumu	Kenya
11.	Dickson Okumu	Kenya
12.	Joanne J. Kibet	Kenya
13.	Joanne J. Kibet	Kenya
14.	Onesmus K. Ngungua	Kenya
15.	Onesmus K. Ngungua	Kenya
16.	Peter Mukiri	Kenya
17.	Peter Mukiri	Kenya
18.	Evelyn Kwizinga	Malawi/Netherlands
19.	Margaret Wazakili	Malawi
20.	Sylvia Kambalometore	Malawi
21.	Awotidebe Taofeek O.	Nigeria
22.	Awotidebe Taofeek O.	Nigeria
23.	Chinonso N. Igwesi-Chidobe	Nigeria
24.	Dr Caleb Ademola Gbird	Nigeria
25.	Dr Omoyeni Ogwumike	Nigeria
26.	Henrietta Arinze	Nigeria
27.	Nwosu Akachukwu	Nigeria
28.	Ogundele Abiola Oladele	Nigeria
29.	Olaleye Olubukola Adebisi	Nigeria
30.	Onyeka Jane Francis	Nigeria
31.	Onyeka Jane Francis	Nigeria
32.	Douglas Maleka	Republic of South Africa
33.	Dr Adesola Diola	Republic of South Africa

34.	Dr Anthea Rhoda	Republic of South Africa
35.	Dr Hellen Myezwa	Republic of South Africa
36.	Dr Linda Steyn	Republic of South Africa
37.	Dr Nondwe Mlenzana	Republic of South Africa
38.	Dr Peter Ibukunle	Republic of South Africa
39.	Lonwabo Godlwana	Republic of South Africa
40.	Nicolette Camley-White	Republic of South Africa
41.	Professor Aimee Stewart	Republic of South Africa
42.	Professor J Jelsma	Republic of South Africa
43.	Professor Jose Frantz	Republic of South Africa
44.	Professor Ushotanefe Ushe	Republic of South Africa
45.	Ronel Roos	Republic of South Africa
46.	Veronica Ntsiea	Republic of South Africa
47.	Acquilina A Sachore	Tanzania
48.	Annie B. Chacha	Tanzania
49.	Elieka A Kaaya	Tanzania
50.	Hillary B. Tesha	Tanzania
51.	Mahoos S. Fens	Tanzania
52.	Simion Simion	Tanzania
53.	Angama Muller Lesue	Togo
54.	Bernard Frank	Togo/Belgium
55.	Odah Kossi	Togo
56.	Hulya Yucel	Turkey
57.	Dr Emmanuel B John	United States of America
58.	Marylou Galantinom	United States of America
59.	Professor Marylin Moffat	United States of America
60.	Professor Olaide Sangoseni	United States of America
61.	Absalom Kabamba	Zambia
62.	Agness M. Kulya	Zambia
63.	Albert Chapo	Zambia
64.	Alick M'hango	Zambia
65.	Andrew Kangwa	Zambia
66.	Andrew Kangwa	Zambia
67.	Angela Muyanga	Zambia
68.	Annie Namukonda	Zambia
69.	Bennon N. Kazembe	Zambia
70.	Bibian Ngosa	Zambia

71.	Bibian Ngosa	Zambia
72.	Billiat Chongo	Zambia
73.	Boniface Chalwe	Zambia
74.	Brian Nkhoma	Zambia
75.	Bruce Mulwani	Zambia
76.	Capt D. Sakala	Zambia
77.	Chamanga M. Mpambanya	Zambia
78.	Charity Muselema	Zambia
79.	Chiluba K. Yamba	Zambia
80.	Chipo Bupe Mushoriwa	Zambia
81.	Chipo Mufaya	Zambia
82.	Chongo Hatwiko	Zambia
83.	Christo Mwanza	Zambia
84.	Claire Mwila	Zambia
85.	Conrad Mwango	Zambia
86.	Constance Mwenge	Zambia
87.	Constance Ngosa	Zambia
88.	Cullen Kalaba	Zambia
89.	Cynthia Mwape	Zambia
90.	Dailless N. Chikwanda	Zambia
91.	Diana Uwamahoro	Zambia
92.	Dominic Sikazwe	Zambia
93.	Donald Mwandila	Zambia
94.	Dorcas M. Mwenge	Zambia
95.	Dr Esther Munalula-Nkandu	Zambia
96.	Dr Martha Banda-Chalwe	Zambia
97.	Ernesto Makayi	Zambia
98.	Evance Sandala	Zambia
99.	Florence Chiwala Salati	Zambia
100.	Francis Mwila	Zambia
101.	Geoffrey Moyo	Zambia
102.	George M. Chigali	Zambia
103.	Gift Vana Njapawo	Zambia
104.	Grace Kayola	Zambia
105.	Grace S. Silanda	Zambia
106.	Hellen Mwembeshi	Zambia
107.	Hilda Mwale	Zambia

108.	Inutu M. Sianga	Zambia
109.	Ivyn Bwalya	Zambia
110.	Jane S. Chela	Zambia
111.	Joseph Hainza	Zambia
112.	Joyce Cleopatra Nkhoma	Zambia
113.	Justin Chula	Zambia
114.	Kaluba Ng'andu	Zambia
115.	Kangwa Chileshe	Zambia
116.	Kennedy Kauka	Zambia
117.	Lastone Kamucha	Zambia
118.	Leonard Silungwe	Zambia
119.	Lewis Kaonga	Zambia
120.	Lieto Wamulwange	Zambia
121.	Likando Mubita	Zambia
122.	Likando Mubita	Zambia
123.	Lillian Chigali	Zambia
124.	Loveness Nkhata	Zambia
125.	Lt Col Kasaro	Zambia
126.	Lukwesa Edgar	Zambia
127.	Major Emmanuel Chapepa	Zambia
128.	Mambwe Kamyunga	Zambia
129.	Mary M. Kamanga	Zambia
130.	Mary Mumba	Zambia
131.	Mayale Mwanza	Zambia
132.	Meda C. Chikonge	Zambia
133.	Mercy C. Mpamba Muketa	Zambia
134.	Mercy M. Daka	Zambia
135.	Metenta Mirriam Nzima	Zambia
136.	Mildred C. Ngwira	Zambia
137.	Mildred Nsofwa	Zambia
138.	Mirriam Mapulanga	Zambia
139.	Mofya Kunda	Zambia
140.	Monica Bishnoi	Zambia
141.	Moses Nkole	Zambia
142.	Muchara B. Makayi	Zambia
143.	Muchinka Peele Mbewe	Zambia
144.	Musonda E. Kamafu	Zambia

145.	Musonda Kamangu	Zambia
146.	Mutale Mpemba	Zambia
147.	Mutale Mpemba	Zambia
148.	Mwape Mutale	Zambia
149.	Namalambo Ng'uni	Zambia
150.	Namatama Mwangana	Zambia
151.	Namoonga Yamba	Zambia
152.	Natasha Mwape	Zambia
153.	Nathan Mwansa	Zambia
154.	Noel Matereke	Zimbabwe
155.	Olipa Zulu	Zambia
156.	Patience N. Buumba	Zambia
157.	Peter D.C. Phiri	Zambia
158.	Precledele G. Kapunga	Zambia
159.	Priscilla Maonde	Zambia
160.	Pumulo Sooli	Zambia
161.	Rabecca Banda	Zambia
162.	Rachael Chama	Zambia
163.	Rachael Chama	Zambia
164.	Rachael M. Nkhowane	Zambia
165.	Roster Chihwaka Malimba	Zambia
166.	Royce Katekwe	Zambia
167.	Samantha E. Lloyd	Zambia
168.	Sherifex S. Mulenga	Zambia
169.	Sombo Sakungo	Zambia
170.	Sr Doreen Mwamba	Zambia
171.	Sr Rabecca Marjory Mwansa	Zambia
172.	Sr. (Dr) Margaret Mweshi	Zambia
173.	Teliwe Mpingilwa	Zambia
174.	Temba A. Kamanga	Zambia
175.	Thumba Ventino	Zambia
176.	Umba Musonda	Zambia
177.	Vera Kunda Puta	Zambia
178.	Victor Sobusa Banda	Zambia
179.	Violet P. Sitwala	Zambia
180.	Vivian Nyiransobiyumva	Zambia
181.	Vivienne Namule Siyamuleya	Zambia

183	Dr Father Jackson Katete (Community Member)	Zambia - Panelist
185	Dr Lishimpi (Encologist)	Zambia - Presenter
182.	Dr Nsakashalo (Ministry of Community Development Mother and Child Health)	Zambia - Panelist
184	Mrs Emy Sikazwe (Cancer survivor)	Zambia - Panelist
186	Professor Sekelani Banda	Zambia - Presenter

Appendix 3: List of Congress Ushers

AIRPORT

- | | |
|---------------------|------------------|
| 1. Siziwe Wenjelani | 4. Moses Nkhoma |
| 2. Inutu Imukusi | 5. Mark Lyamana |
| 3. Grace Jedburg | 6. Dennis Bwalya |

DISPLAY BOOTHS

- 7. Margaret Chalungumana
- 8. Mwenya Kalokoni
- 9. Joseph Kasolo

RAPPORTEUR/DOCUMENTATION/PRODUCTION

- 10. Andrew Phiri
- 11. Ackim Banda
- 12. Samantha Zulu

CONFERENCE ROOMS

- | | |
|-------------------------|----------------------|
| 13. Sabina Twizere Jane | 18. Humphrey Ilunga |
| 14. Deliwe Mangowela | 19. Felix Mushili |
| 15. Simona Nkhabise | 20. Charity Musonda |
| 16. Mwaba Mulanga | 21. Yorum Tony Phiri |
| 17. Simon Kafumazi | |

FIRST AID

- 22. Margret Muntemba
- 23. George Mubita

INFORMATION DESK

- 24. Mutinta Hambulo
- 25. James Siayamayuwa Sianebe

FOOD/LUNCH/TEAS

26. Esther Lifumbo

27. Pauline Mwenya

REGISTRATION DESK

28. Joseph Masongo

29. Farai Mutale

30. Akufuna Litebele