







5th Annual Africa Interdisciplinary Health Conference

BOOK OF ABSTRACTS

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Theme

**Strengthening Africa's Health Systems Through
Interdisciplinary Research and Communication**

Sub-Themes

Education and Training for Healthcare Professionals in Africa;
Response to Emerging Infectious Diseases in Africa;
Community Engagement in Healthcare Delivery;
Innovation and Collaboration towards Achieving Sustainable Development
Goals (SDGs) in Africa;
Africa's Response Strategies to Covid-19 Pandemic;
Challenges with Chronic and Non-communicable Diseases in Africa;
The Role of Health Insurance in Reducing the Disparity in Healthcare;
Strengthening the Nexus between the Health and Social Sciences for Optimum
Health;
Innovative and Emerging Approaches to Health Communication

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Table of Contents

Management of Chronic Non-Communicable Diseases in Ghana: Qualitative Study of the Practices, Coping Strategies, and Challenges in the Volta Region Robert Kokou Dowou and Hubert Amu	1
Magnitude and Causes of Maternal Mortality in Sidama Regional State, Southern Ethiopia: Population Based Survey Aschenaki Zerihun Kea, Bernt Lindtjorn, Achamyelesh Gebretsadik and Sven Gudmund Hinderaker	2
Determinants of Late Reporting Of Breast Cancer to Health Facilities in Northern Ghana Solomon Suglo	3
Living with Schizophrenia: The Role of Interpersonal Relationships Isaac Tetteh Commey, Jerry Paul K. Ninnoni and Evelyn Asamoah Ampofo	4
Maternal Mortality in Sidama Regional State, Southern Ethiopia: Estimates Using the Sisterhood Method Aschenaki Zerihun Kea, Bernt Lindtjorn, Achamyelesh Gebretsadik and Sven Gudmund Hinderaker	5
Healthcare Financing Policy Tools as Determinants of Health System Efficiency: Evidence from Sub-Saharan Africa Kwadwo Arhin	6
Effects of a School-Based Intervention to Reduce Cardiovascular Disease Risk Factors among Secondary School Students John Amoah	7
Experiences with Prosthetic Rehabilitation after Lower Limb Amputation in Ghana: An Exploratory Study Rebecca Dordunu, Josephine Mpomaa Kyei, Charles Ampong Adjei	8
Unsafe Abortions among Adolescents in Chibolya Compound, Katete District Zambia Mutinke Zulu, Precious Banda and Richard Chipoya	9
Quantitative Survey of Caretakers Satisfaction to Support Student Patients on Admission Maxwell Seyram Kumah, Ambrose Ayikue and Able Delawu Blenyi	10
Factors Contributing to Inadequate Utilisation of Local Primary Healthcare Facilities by Women during Labour and Childbirth in Limpopo Province, South Africa Ruth Kgadi Mosehla, Mmapheko Doricah Peu and Melitah Molatelo Rasweswe	11
How Lekgotla Discussion was Used to Formulate and Verify the Strategies to Empower Women with Indigenous Dysmenorrhea Knowledge Melitah Molatelo Rasweswe	12
CSD-Materials: An Indispensable Tool for the Prediction of Polymorphism in the Pharmaceutical Industry Samuel Tetteh	13
Covid-19 Vaccine Hesitancy among the Adult Population in Ghana: Evidence from a Prevacination Rollout Survey Robert Kaba Alhassan, Matilda Aberese-Ako, Phidelia Theresa Doegah, Mustapha	

Immurana, Maxwel Ayindenaba Dalaba, Alfred Kwesi Manyeh, Desmond Klu, Evelyn Acquah, Evelyn Korkor Ansah and Margaret Gyapong	14
Leveraging E-Learning Technology to Enhance Pre-Service Training for Healthcare Trainees in Ghana: Evidence from a Pilot Project and Pointers to Policy Reforms Robert Kaba Alhassan, Martin Amogre Ayanore, John-Bosco Diekuu, Emmanuel B. A. Prempeh and Ernestina Safoa Donkor	15
Covid-19 Vaccine Uptake among Health Care Workers in Ghana: A Case for Targeted Vaccine Deployment Campaigns in the Global South Robert Kaba Alhassan, Seth Owusu-Agyei, Evelyn Korkor Ansah and Margaret Gyapong	16
The Journey of Getting Cervical Cancer Diagnosis: Experiences of Women in Accra, Ghana David Ayangba Asakitogum, Lydia Aziato and Lillian Akorfa Ohene	17
An Assessment of Mental Healthcare Financing Strategies and the Free Mental Health Policy of Ghana Richard Agbanyo, James Ntiamoah Doku, Richard Kofi Akoto and Dannette Aku Dotse	18
Perception about Elder Abuse Perpetration among Caregivers of Elderly Persons in Oyo State, Southwest Nigeria Oludoyinmola O. Ojifinni, Emmanuel Adebayo and Obioma C. Uchendu	19
Mental Health Literacy: A Case Study of Students at (T.I) Ahmadiyya And Kumasi Anglican Senior High Schools, Ghana Rebecca Tawiah, Wisdom Kwadwo Mprah, Enoch Acheampong, Emmanuel Appiah Brempong, Hasehni Vampere, Naomi Gyamfi, Godfred Atta-Osei, Daniel Gyaase and Theresah Ivy Mensah	20
Experiences of Healthcare Workers in Ghana and Kenya during the Covid-19 Pandemic: Implications on Job Satisfaction and Motivation Patience Afulani, Akua O. Gyamerah, Jerry J. Nutor, Raymond A. Aborigo, Hawa Malechi, Joseph Musana, Linnet Onger, Moses Mimed Obimbo Madadi and John K. Awoonor-Williams	21
Spatial Analysis of Buruli Ulcer among Residents in the Hohoe Municipality Atubiga Alobit Baba, John Gyapong, Martin Adjuik and Michael Adjabeng	23
Determinants of Covid-19 Vaccine Uptake among FSW in Nairobi County, Kenya Akolo, M. , Kimani, J, Ndirangu, E, Kambo, I., Musembi, H., Ongeso A., Mutwiri., B and Gelmon, L	24
Herbs, Spirits and Treatment of Gonorrhoea in Ghana: A Focus of the Traditional Health Practitioner Wonder Agbemavi and Kobina Esia-Donkoh	25
Factors Associated with Provision of Person-Centered Maternity Care: A Cross-Sectional Study with Maternity Providers in Kenya and Ghana Afulani, P. A., Aborigo, R., Nutor, J. J., Jaffer Okiring, Kuwolamo, I., Ogola, B., Ndhine, E., Dorzie, J.B. and Odiase O	26
Pre-Operative Experiences and Expectations of Patients at the Suntreso District Hospital in Ghana – A Phenomenological Study Eunice Eduful Adu-Gyamfi, Veronica Millicent Dzomeku and Emmanuel Keku	27

The Extent of Self-Reported Impact of Covid-19 on Daily Life and Income among University Students in Kumasi, Ghana	28
Emmanuel Keku, Sandra Asabea and Vincent Adu	
The Uptake of Key Interventions among Pregnant Women Attending Antenatal Clinic at the University Hospital - KNUST, Kumasi	29
Rosemond Serwaa Nyarko, Enoch Acheampong and Emmanuel Keku	
Factors Contributing to the Default of Sulphurdoxine-Pyrimethamine for Intermittent Preventive Treatment of Malaria among Pregnant Women in the Kwadaso Municipality	30
Magdalene Abiana Quantson, Emmanuel Keku and Solomon Aruna Nelson	
In Vitro and in Vivo Antiplasmodial Activity of B-Amyrin and its in Silico Plasmodium Falciparum Target(S) Prediction	31
Isaac Tabiri Henneh and Silas Osei Acheampong	
To Take or not to Take: Determinants of Student's Preparedness to Take Covid-19 Jabs In The University Of Cape Coast, Ghana	32
Solomon Sika-Bright and Daniel Ampem Darko-Asumadu	
An Evaluation of the Tuberculosis Surveillance System in the Lankwantang Madina Municipality during the Covid-19 Pandemic	33
Alex Ansah Owusu	
Association of Sociodemographic Factors with Knowledge and Compliance to Standard Precautions Measures amongst Student Nurses in Eswatini University	34
Ncobile Victoria Gina, Melitah Molatelo Rasweswe and Mmaphamo Miriam Moagi	
Health Systems Resilience in Contexts of Unequal Chances in Access to Health Insurance in Nigeria	35
Uju, R. Ezenekwe and Henry T. Asogwa	
Mental Health and Substance Abuse among Adolescents: Literature Review	36
Miriam Moagi, Prof Salaminah Moloko-Phiri and Dr Molekodi Matsipane	
Parental Involvement in the Sex Education of Adolescents with Disabilities in the Ejisujuaben Municipality	37
Theresah Ivy Mensah, Wisdom Kwadwo Mprah, Daniel Gyaase and Rebecca Tawiah	
Interdisciplinary Intervention to Reduce Poverty and Undernutrition in Kigezi, Uganda: The Rabbit Breeding Project	38
Becca Dworkin, Geoffrey Anguyo, Lisa Hirschhorn, Arnold Kamugisha, Chrissy Nahereza, Becca Dworkin, Danielle Steker and Patrick Driscoll	
Using Embedded Implementation Research to Guide Interdisciplinary Evaluation: the Rabbit Breeding Project in Southwestern Uganda	39
Geoffrey Anguyo, Lisa R Hirschhorn, Danielle Steker, Arnold Kamugisha, Christable Nahereza, Patrick Driscoll and Becca Dworkin	
Knowledge, Attitude and Practice of Mothers Regarding under five Nutrition: Key Policy Recommendations	40
Alice Makafui Yevoo, Samuel Mayeden and Koku Awoonor-Williams	
Perception and Attitude of Mothers towards Use of Chlorohexidine-Gel for Umbilical Cord Care During Ante-Natal and Post-Natal Care Sessions at South West Hospital, Nigeria	

Olubiyi Simeon Kayode, Anyebe E. Emmanuel, Morohunkeji Kemi Adeyinka, Yusuf Gambari, Yakatum S., Adeola Richard and Bello, C.B.	41
Exploring Challenges for Managing Chronic Health Conditions - At the Last Mile. Lamu, Kenya	
Amina Mohamed, Sarah Bury, Eleanor Manners and Jackson Mugambi	42
Strengthening Research through African Diaspora Organization through Medical Education and Research Strengthening Initiative (MERSI)	
Thanaa Alagraa, Mohammed Albirair, Mohammed Alhassan, Abdelhafeez Abdelhafeez and Eiman Mahmoud	43
Knowledge and Practices of Infection Prevention among Health Workers at Police Training School 11, Ebola Treatment Centre, Hastings, Freetown, Sierra Leone	
Frank Nukunu, Frank Agyapong, Nathaniel Amissah Gyasi and Jegede Babatunde	44
Factors Affecting the Utilization of Screening Services for Cervical Cancer among Women in the Cape Coast Metropolis, Ghana	
Samuel Kofi Arhin, Hannah Benedicta Abdulai-Taylor, Precious Barnes and Rebecca Kumto	45
Assessment of Knowledge, Perceptions and Beliefs towards Universal Safety Precautions and Vaccine Acceptance in Ghana	
Hannah Benedicta Taylor-Abdulai, Stephen Ocansey, Samuel Kofi Arhin, Precious Barnes and Collins Paa Kwesi Botchey	46
Lived Experiences of Patients Co-Infected with HIV and Tuberculosis in the Cape Coast Metropolis	
Hannah Benedicta Taylor-Abdulai, Susanna Kwakye and Blesslina Oteng Sam	47
Translation, Cultural Adaptation and Psychometric Properties of the Ghanaian Language (Akan; Asante Twi) Version of the Health Literacy Questionnaire	
Millicent Addai Boateng, Peter Agyei-Baffour, Sanne Angel, Ulrika Enemark	48
Bidirectional Relationship between Cognition and Motor Function in Older Ghanaians: Results from the WHO-Study on Global Ageing and Adult Health (SAGE) Wave 2	
Daniel Gyaase, Benjamin Noble Adjei, Yeetey Enuameh, Theresah Ivy Mensah, Lilian Mawuse Mort and Emmanuel Kweku Nakua	49
Care Seeking Behaviour and Knowledge of Mothers Regarding Pneumonia in Under-Five Children at Bashayir Hospital, April 2020/October 2021	
Zaid Suleiman Abdulla Zaid and Thanaa Alagraa	50
Predictors of Adherence and Survival among HIV/AIDS Adult Patients in Volta Region of Ghana	
Lilian Mawuse Mort and Sam Newton	51
The Use of Pineapple Leaf Fiber for Prosthetic Socket Application	
Eric Worlawoe Gaba, Bernard Owusu Asimeng, Elsie Effah Kaufmann, E. Johan Foster and Elvis Kwason Tiburu	52
Response to Covid-19 Pandemic in Slum Communities in Oyo State, Nigeria	
Cecy Edijala Balogun	53
Alteration in Taste and Hair in Breast Cancer Patients Treated with Chemotherapy: Exploration of Coping Strategies	
Gbande Sulleh, Lydia Aziato and Lillian Akorfa Ohene	54
Comprehensive Knowledge about HIV and General Health Literacy in Angola	55

Utilization of Online Education among Nursing Students During Covid-19 Pandemic: A Study in the Northern Region of Ghana	
Neida Ramos, Maria do Rosário Martins and Inês Fronteira	56
Determinants of Covid-19 Vaccine Uptake among FSW in Nairobi County, Kenya	
Akolo, M., Kimani, J., Ndirangu, E., Kambo, I., Musembi, H., Ongeso, A., Mutwiri, B. and Gelmon, L	57

Management of Chronic Non-Communicable Diseases in Ghana: Qualitative Study of the Practices, Coping Strategies, and Challenges in the Volta Region

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Background: Globally, chronic non-communicable diseases (CNCDs) have become the primary cause of morbidity and mortality over the past three decades. Effectively managing these diseases, therefore, becomes imperative in achieving the sustainable development goal of 3.4 of reducing by one-third premature mortality from non-communicable diseases through prevention and treatment by 2030. The study explored the practices, coping strategies, and challenges associated with the management of CNCDs by patients, health professionals and caregivers in the Volta Region, Ghana.

Methods: This was a qualitative study which collected data from 25 CNCD patients, 8 caregivers and 6 health professionals using in-depth interviews. Data were analysed thematically using ATLAS.ti. v7.5.7.

Results: Management practices by health professionals involved assessment to ascertain the type and the severity of patients' conditions and the provision of education and counselling. Management practices of patients entailed self-management activities which included engagement in physical exercise and adoption or modification of dietary patterns. Family members were the main caregivers, who mainly provided social and financial support to patients in the management of their CNCDs. Patients were mostly passively involved in the management of their conditions. Religious coping which included prayers and the belief in God and engaging in social activities, were coping strategies adopted by patients. Language barriers, job-related stress and inadequate logistics were major challenges confronting health professionals in the management of CNCDs while financial challenges were the main challenges faced by patients.

Conclusion: Health professionals and patients experienced challenges in the management of CNCDs. Collaborative roles by health professionals, patients and caregivers are essential in improving management outcomes. More investments are needed in the form improved infrastructure, uninterrupted provision of logistics, recruitment of more staff, and improved inclusion of CNCD medications in the medicines list of the National Health Insurance Scheme, to improve the management of CNCDs and accelerate progress towards achievement of SDG 3.4 of reducing premature mortality from CNCDs by the year 2030.

Magnitude and Causes of Maternal Mortality in Sidama Regional State, Southern Ethiopia: Population Based Survey

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Background: To monitor the progress towards achieving the sustainable development goals (SDGs), every maternal death needs to be counted through civil registration and vital statistics (CRVS). In developing countries, producing accurate measures of maternal mortality from CRVS remains big challenge. In the absence of functional CRVS, countries rely on global or national estimates and surveys.

Purpose: This study was conducted to estimate the maternal mortality ratio with local variations, and its risk factors in rural Sidama, southern Ethiopia, 2020.

Methods: We conducted population based household cross sectional survey in Sidama Regional State, southern Ethiopia. Multistage sampling technique was employed to identify women that had pregnancy and pregnancy outcomes in past five year. Maternal death was ascertained using Verbal Autopsy. We employed complex sample analysis techniques using Stata 15.

Results: We visited 8755 (response rate 98.6%) households and identified 55 maternal deaths yielding maternal mortality ratio (MMR) of 419 (95% CI: 260, 577) per 100,000 live births (LB). There were significant variations of MMR ranging from 114 to 1142 per 100,000 LB among the districts. The major causes of maternal death were hemorrhage (38.2%), eclampsia (23.5%) and obstructed labour (12%). The risk of maternal death was four times higher among mothers with no education compared to those who had.

Conclusion: The countries effort to attain the SDG should focus on addressing local variations. More effort should be in place to improve the educational status of women in order to improve the grave effect of lack of education on mothers' life.

Determinants of Late Reporting of Breast Cancer to Health Facilities in Northern Ghana

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Background: Available statistics indicate that a woman dies every 69 seconds from breast cancer globally. In Ghana, breast cancer is one of the most common causes of hospital admissions and mortality among women. Despite that fact that early diagnosis and presentation to health facility for treatment contribute to a good prognosis and prevention of morbidity and mortality most breast cancer patients still report late with either stage III or IV of the disease. This study therefore, explored health determinants for late presentation with breast cancer from the perspectives of women visiting the Breast Clinic at Tamale Teaching Hospital in Northern Ghana.

Methods: A descriptive cross-sectional method was used to assess patients' knowledge on determinants for late reporting using a structured questionnaire as the data collection instrument.

Results: The results showed 56% did not know how to self examine their breast for early signs of breast cancer disease hence were more like to report late to the health facility. About 80% demonstrated limited or no knowledge on early warning signs of breast cancer disease. Other major determinants identified included: socio-cultural barriers (84%), fear of losing their breast or partner (86%), fear of stigmatization and/abandonment (68%) and seeking health first from unorthodox sources (80%).

Conclusion: The authors therefore recommend education of women focusing on the determinants of late reporting breast cancer and the dangers of seeking health care from unorthodox sources.

Living with Schizophrenia: The Role of Interpersonal Relationships

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Background: Research suggests that a robust interpersonal relationship is crucial for mental health and physical well-being. People living with a chronic condition such as schizophrenia encounter significant challenges interacting with their immediate environment. There is currently little data exploring interpersonal relationships between people with schizophrenia with their families and healthcare providers. This study investigated the interpersonal relationship experiences of persons living with schizophrenia in Southern Ghana.

Methods: The study adopted a descriptive phenomenological approach using the purposive sampling technique. Nine (9) persons living with schizophrenia participated in the study. Data were collected using semi-structured in-depth face-to-face interviews. Data were analysed using a descriptive phenomenological data analysis framework.

Results: The study revealed that people with schizophrenia encountered positive and negative experiences developing and maintaining interpersonal relationships with their families, healthcare providers, religious organisations and the general population. However, a poor interpersonal relationship existed between study participants and the public (people outside their homes).

Conclusion: Stigma was implicated as a factor responsible for the negative interpersonal relationships between study participants and people outside their immediate families.

Keywords: Ghana, Interpersonal relationship, Schizophrenia, Stigma

Maternal Mortality in Sidama Regional State, Southern Ethiopia: Estimates using the Sisterhood Method

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Background: Public health programs aiming at reduction of maternal deaths rely on accurate measures of maternal mortality. In settings where this information is not well captured through vital registrations, population based surveys employing the sisterhood method is used to assess the level of maternal mortality.

Purpose: The aim of this study was to estimate life time risk (LTR) and maternal mortality ratio (MMR) using the sisterhood method.

Methods: Population based cross sectional survey was conducted in Sidama Regional State, southern Ethiopia. We interviewed 17,444 men and women aged 15-49 years and created cohort of siblings (15-49 age). We computed sisters unit of exposure and LTR. Total fertility rate 5.2 used to estimate MMR.

Results: We analyzed 17,374 cases; men 8,884 (51.1%) and women 8,490 (48.9%). The 17,374 respondents reported 64,387 maternal sisters reached 15-49 years. Among the 64,387 sisters, 2402 (3.7%) had died: 776 (32.3%) were pregnancy related deaths while 1,626 (67.7%) were due to other causes. LTR was 3.2% and MMR was 623 (95% CI: 573-658) per 100,000 live births (LB). The sisters of female and male respondents had comparable LTR and MMR. The sisters of participants of Aleta Wondo district had LTR 2.2%, MMR 417 (95% CI: 351, 495) while Aroresa district had LTR 6.1%, MMR: 1210 (95% CI: 1027, 1318) per 100, 000 LB.

Conclusion: We found high MMR and significant variations in the study area. Concerted effort is needed to achieve the sustainable development goal in general with due attentions to local variations in particular.

Healthcare Financing Policy Tools as Determinants of Health System Efficiency: Evidence from Sub-Saharan Africa

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Background: Many countries around the Sub-Saharan African (SSA) region have and/or are considering a fundamental restructuring of their healthcare financing systems to achieve better health outcomes. The current wave of enthusiasm for achieving universal health coverage (UHC) by the year 2030, which is inspired by the United Nation's Sustainable Development Goal 3.8, provides a unique opportunity for policy-makers to make use of evidence-based academic research in designing the most efficient healthcare financing systems.

Purpose: This paper examines the effect of health care financing policy tools on the efficiency of health systems in producing better health outcomes.

Methods: Stochastic frontier approach is employed to measure the efficiency of health systems. The health care financing policy tools are included as the determinants of health system efficiency analysis. Data from 46 Sub-Saharan Africa (SSA) countries from 2000 to 2019 are analyzed.

Results: The results show that compulsory health financing arrangements comprising social health insurance as well as broader health-system types such as mixed- and external-financing of health care are significant contributors to health system efficiency in producing better health outcomes.

Conclusion: From policy-making purposes, health care financing through a mix of financing arrangements comprising social health insurance, private and public funding improve health system efficiency in delivering better health outcomes as opposed to depending on one major source of financing, particularly, private out-of-pocket payments or domestic general government funding.

Keywords: Health financing policy tools, Social Health Insurance, Compulsory Health Financing, Technical Efficiency, Stochastic Frontier Analysis, Sub-Saharan Africa

Effects of a School-Based Intervention to Reduce Cardiovascular Disease Risk Factors among Secondary School Students

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Background: Cardiovascular diseases (CVDs) are the number cause of death worldwide. In Ghana CVD has been the leading cause of death since 2001. Prevalence of CVD risk factors among adolescents in Ghana has been increasing.

Purpose: This study seeks to develop, implement and evaluate the effectiveness of a behavioral modification intervention program to reduce CVD risk factors students in Ghana.

Methods: A cluster-randomized controlled trial was conducted for six-months. Participants were secondary school students from four schools. Students in the intervention group received modules on health education and physical activity whereas the control group received no intervention. Follow-up data were collected after the intervention and the generalized linear mixed model was used to assess the effects of the intervention

Results: The GLMM analyses showed the intervention was significant in attaining 0.77($p<0.001$), 0.72($p<0.001$), and 0.47($p<0.001$), higher total physical activity, fruits, and vegetables scores respectively for the intervention group over the control group. The intervention was also significant in reducing -0.90($p<0.001$), -1.63($p<0.001$), -0.61($p<0.001$), and -1.53($p=0.005$) carbonated drinks, weight, BMI, and diastolic BP. The odds of quitting alcohol use in the intervention was 1.06 times more than the control group. There was no significant effect on reducing smoking and systolic BP.

Conclusions: There is an urgent need for the intervention program to be integrated into the existing curriculum structure of secondary school schools. Implementing the intervention will allow for longer and more consistent impact on the reduction of CVD risk factors among secondary school students.

Keywords: Cardiovascular disease, risk factors, intervention, students, adolescents

Experiences with Prosthetic Rehabilitation after Lower Limb Amputation in Ghana: An Exploratory Study

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Background: Lower Limb Amputation (LLA) is a major public health concern in Africa. Between 2010 and 2015, there has been a significant increase in LLA from 1 per 1000 to 11 per 1000 admissions. Persons with LLA have been noted to experience a myriad of physical, psychological and functional problems. To address these challenges, an artificial leg (prosthesis) is prescribed to aid ambulation of persons with LLA. In recent times, studies in Ghana have focused mainly on causes and prevalence of LLA. Although these studies have offered useful insights, there is limited empirical data on the experiences of persons with LLA with respect to prosthesis usage. Whether or not the prostheses are serving the intended purposes remains a subjective experience and can only be explained by the patients themselves. This study therefore sought to explore the lived experiences of persons with lower limb prosthesis in Ghana.

Purpose: The objective of the study was to explore the experiences of lower limb prosthetic users in relation to prosthetic rehabilitation after lower limb amputation in Ghana

Methods: An exploratory qualitative design with a purposive sampling technique was used for this study. Face to face interviews were conducted for 17 persons with lower limb prosthesis. Participants were recruited from an orthopedic and prosthetic rehabilitation center in Ghana. The data transcribed verbatim and analyzed using thematic content analysis.

Results: Two main themes emerged from the study. They were; the individual level experiences and the family and peer level experiences. Participants experienced internal stigma and discomfort from the prostheses at the individual level. At the family and peer level, participants experienced relationship avoidance, loss of independence, stigma from family/peer and altered sex life. Furthermore, coping mechanisms employed by these prosthetic users was also identified. These were; isolation, recreation, disregard of negative comments and faith in God.

Conclusion: Persons with lower limb prosthesis experience numerous physical and psychological problems throughout their lives. These experiences range from individual level experience and family/peer level experience. The equilibrium interactions between these variety of experiences affect all aspects of their lives. Therefore, understanding these experiences is paramount in providing care and support to these prosthetic users within the society. Furthermore, understanding prosthetic users experience is necessary for a more collaborative and integrative approach between nurses, physicians and prosthetist in the provision of rehabilitative care for persons with lower limb prostheses

Unsafe Abortions among Adolescents in Chibolya Compound, Katete District Zambia

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Background: Worldwide, about 80 million pregnancies are unplanned and 46 million end in abortions with the majority, 97%, being unsafe. In Zambia, 30% of maternal deaths are due to unsafe abortions and mostly occur among adolescents. Katete District recorded 653 and 268 cases of unsafe abortions in 2016 and 2017 respectively.

Purpose: To establish factors associated with the unsafe abortions among adolescents

Methods: A descriptive cross section study was conducted in June and July, 2018 with 366 adolescents who were conveniently selected. A structured interview schedule with questions on socio-demographic, knowledge on safe abortion services and family planning was used for data collection. Data was analysed using Statistical Package for the Social Sciences version 23.0. Chi-square test with 0.05 level of significance was used to determine the significance of the association between variables.

Results: The study showed that 162 (44.3%) of the respondents had aborted before. Majority of whom 71% (115) had aborted once while 29% (47) had aborted twice or more. Majority, 85.5% (313) had poor knowledge on safe abortion services. The study established statistically significant associations between knowledge on unsafe abortions and the level of education with a p-value of 0.002 and unsafe abortion with utilization of family planning services with a p-value of 0.001.

Conclusion: Poor knowledge on safe abortion services contributed to high cases of unsafe abortions among adolescents. Midwives and other health care providers must design programs to educate adolescents about prevention of unwanted pregnancies and also create awareness about safe abortion services.

Quantitative Survey of Caretakers Satisfaction to Support Student Patients on Admission

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Background: The hospital serves an important place for the health of all humans. Although in Africa there are local herbs that are used as means of curing some ill health cases, the hospital in recent times remains the main source of wellbeing during ill health.

Purpose: This study investigated the satisfaction of caretakers who supports student patients on admission.

Methods: We employed a quantitative descriptive research design. A sample of 387 participants were purposively and randomly selected. Caretakers of Student Patients on Admission Questionnaire (CSPAQ) was used to elicit information from participants. The instrument was reliable with a Cronbach alpha of 0.744.

Results: It was found that grand mean (1.85) and (2.33) indicate participants' dissatisfaction about the place of residence and involvement in decision-making respectively, and mean (3.16) shows satisfactory of healthcare offered to their patients on admission at the hospitals. Using independent sample t – test (Mann Whitney U test), there was significant difference in sex and participants' decision-making satisfaction but not residence and healthcare satisfaction. Meanwhile, there is a significant difference in location and participants' residence and healthcare but not decision-making. Again, there was a significant difference in participants' view on healthcare and decisionmaking in relation to units/ departments. A post-hoc analysis was conducted to determine the differences among groups.

Conclusion: We conclude that the participants expressed their main dissatisfaction in residence but not healthcare. For this reason, we recommend that hospitals should improve the place of residence of caretakes of patients.

Keywords: Relative of patients, Residence, Healthcare, Decision-making, Hospitals

Factors Contributing to Inadequate Utilisation of Local Primary Healthcare Facilities by Women during Labour and Childbirth in Limpopo Province, South Africa

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Background: Various strategies have been developed and implemented by the national Department of Health of South Africa (DoHSA) to improve the health of women during antepartum, intrapartum and postpartum. Despite, implementation of this strategies, there is still inadequate utilisation of local primary healthcare facilities by the women during labour and childbirth in Limpopo province, Mopani district.

Purpose: To explore and describe the factors contributing to inadequate utilisation of local primary healthcare facilities by women during labour and childbirth in Limpopo province, South Africa.

Methods: The study was qualitative in nature. Purposive and convenience sampling was used to select the mothers attending six weeks postpartum care at a local clinic. A focus group was used to collect data. Data analysis followed Tesch analysis method.

Results: The findings revealed three interrelated themes: 1) Difficulty in accessing childbirth services, 2) Shortage of staff and material resources, 3) negative attitudes from healthcare professionals.

Conclusion: There is a need to improve quality of labour and childbirth services at the district level. These might assist in reducing perinatal mortality rate in Limpopo province South Africa.

Keywords: Childbirth; Factors; Labour; Primary healthcare facilities; South Africa; Utilisation; Women

How Lekgotla Discussion was Used to Formulate and Verify the Strategies to Empower Women with Indigenous Dysmenorrhea Knowledge

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Background: Currently, scholars globally are challenging the widely accepted Western research methods by using decolonized processes, such as Lekgotla discussion to research in the indigenous communities. The Lekgotla discussion is an open forum in which indigenous communities in Sub-Saharan Africa use to debate and reach agreements on community raised issues.

Purpose: To apply Lekgotla discussion process as a data collection technique

Methods: The study was qualitative. Participatory Action Research, following a Lekgotla discussion process. Twenty-two expert with a variety of experience in both Indigenous and Western dysmenorrhea knowledge were selected purposively to participate in a discussion. The Lekgotla discussion was modified and facilitated in the form of debates and dialogues. The discussion was based on the concept, indigenous dysmenorrhea. The debates and dialogues were analysed by the researcher and participants using content data analysis. A statistical presentation determining the mean (M) and percentage agreement (PA) was also used.

Results: The Lekgotla discussion followed a workshop process and was divided into four steps: 1) Arrival and Welcome, 2) Engaging participants, 3) Reaching consensus on the strategies to empower Batlokwa women with dysmenorrhea knowledge, 4) Verification and refinement of the strategies to empower Batlokwa women with dysmenorrhea knowledge. A facilitator was selected by the participants to facilitate the discussion and summarizes the inputs once all the participants have raised their ideas and there was no newer information was shared. Additionally, the participants demonstrated the highest respect for one another, each participant shared ideas without being interrupted, but the ideas were debated on for common agreement. Hence, consensus on the strategies to empower women with indigenous dysmenorrhea knowledge was reached in the workshop.

Conclusion: The success of applying the process of Lekgotla discussion proved that the indigenous epistemologies are increasingly accepted to achieve research objectives.

Keywords: Batlokwa; Dysmenorrhea; Indigenous; Knowledge; Lekgotla; Strategies; Women

CSD-Materials: An Indispensable Tool for the Prediction of Polymorphism in the Pharmaceutical Industry

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Background: Polymorphism is the existence of multiple crystal forms of the same compound. This phenomenon is widely prevalent in the pharmaceutical industry as 50% of known drug compounds are known to be polymorphic. These different forms of the same chemical compounds have different physicochemical properties which affect their stability and bioavailability in biological media. A notable example is the anti-HIV drug ritonavir which was marketed in 1996 as an oral solution for the treatment of AIDS. In time, a more stable polymorph with reduced bioavailability was discovered and the drug had to be withdrawn [2]. Prediction of polymorphism is therefore key in the drug discovery process which involves the investment of millions of dollars. Recently, the Cambridge Crystallographic Data Centre (CCDC) launched a predictive tool (Hydrogen Bond Propensities) as part of their CSD-Materials suite of programs. This tool uses the ability of crystal structures to form hydrogen bonding coupled with statistical data analyses of the over 1 million crystal structures in the Cambridge Structural Database (CSD) to predict the likelihood of polymorphism in crystal structures based on propensity scores.

Purpose: In this presentation, I will demonstrate the prowess of this software package using some notable crystal structures of drug molecules retrieved from the CSD.

Expected Outcome: It is believed that participant will appreciate the importance of crystal structure prediction (CSP) in this multimillion industry.

Covid-19 Vaccine Hesitancy among the Adult Population in Ghana: Evidence from a Pre-vaccination Rollout Survey

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Background: Coronavirus disease 2019 (COVID-19) has already claimed over four million lives globally and over 800 deaths in Ghana. The COVID-19 vaccine is a key intervention towards containing the pandemic. Over three billion doses of the vaccine have already been administered globally and over 800,000 doses administered in Ghana, representing less than 5% vaccination coverage. Fear, uncertainty, conspiracy theories and safety concerns remain important threats to, a successful rollout of the vaccine if not managed well.

Purpose: To ascertain the predictors of citizens' probability of participating in a COVID-19 vaccine trial and subsequently accept the vaccine when given the opportunity.

Methods: The study was an online nation-wide survey among community members (n=1556) from 18th September to 23rd October, 2020 in the 16 regions in Ghana. Binary probit regression analysis with marginal effect estimations was employed to ascertain the predictors of community members' willingness to participate in a COVID-19 vaccine trial and uptake the vaccine.

Results: Approximately 60% of respondents said they will not participate in a COVID-19 vaccine trial; 65% will take the vaccine, while 69% will recommend it to others. Willingness to voluntarily participate in COVID-19 vaccine trial, uptake the vaccine and advise others to do same was higher among adults aged 18–48 years, the unmarried and males ($p < 0.05$). Significant predictors of unwillingness to participate in the COVID-19 vaccine trial and uptake of the vaccine are: married persons, females, Muslims, older persons, residents of less urbanised regions and persons with lower or no formal education ($p < 0.05$). Predominant reasons cited for unwillingness to participate in a COVID-19 vaccine trial and take the vaccine included fear, safety concerns, lack of trust in state institutions, uncertainty, political connotations, spiritual and religious beliefs.

Conclusion: The probability of accepting COVID-19 vaccine among the adult population in Ghana is high but the country should not get complacent because fear, safety and mistrust are important concerns that have the potential to entrench vaccine hesitancy. COVID-19 vaccine rollout campaigns should be targeted and cognisant of the key predictors of citizens' perceptions of the vaccine. These lessons when considered will promote Ghana's efforts towards vaccinating at least 20 million people to attain herd immunity.

Leveraging E-Learning Technology to Enhance Pre-Service Training for Healthcare Trainees in Ghana: Evidence from a Pilot Project and Pointers to Policy Reforms

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Background: E-Learning solutions are increasingly being advocated to augment existing traditional teaching and learning efforts in health training institutions. Unfortunately, these emerging technologies rarely focus on health sciences education within the context of public universities, hence the need for this study. This project evaluated experiences of healthcare trainees with a pilot e-Learning project (SMART e-Learning project) initiated in one of Ghana's public universities in 2017.

Methods: The study used a mixed methods cross-sectional approach among 363 healthcare trainees. Data collection was between 17th October, 2019 to 3rd December, 2019. Data was analysed descriptively and test for variable differences done using Pearson Chi-square and Fisher's Exact for categorical variables. Wilcoxon Mann-Whitney test was used to test for differences in the Likert scale items. Additionally, rotated varimax factor analysis was performed for the health trainees' rated satisfaction factors.

Results: Out of 446 respondents who consented to participate in the study, 363 responses were complete and valid, representing a response rate of 81 %. Most frequently used e-learning facilities by healthcare trainees were: writing interim assessments (IAs) (82 %) while the least used function was live chatting with faculty (5 %). Challenges associated with the e-learning pilot project were: limited workspace in the pilot computer laboratory (33 %), slow internet/intranet speed (29 %) and limited capacity of teaching and ICT staff to support users (28 %).

Conclusions: There is the need to engage relevant stakeholders at the University, ministries of health and education through policy dialogues to develop statutory e-Learning guidelines for health educational institutions of higher learning to complement existing traditional teaching and learning approaches.

Covid-19 Vaccine Uptake among Health Care Workers in Ghana: A Case for Targeted Vaccine Deployment Campaigns in the Global South

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Background: Health care workers (HCWs) are among the high-risk groups in contracting and dying from COVID-19. World Health Organization estimates that over 10,000 HCWs in Africa have been infected with COVID-19 making it a significant occupational health hazard to HCWs. In Ghana, over 100 HCWs have already been infected and dozen others died from the virus. Acceptability and uptake of the COVID-19 vaccine is therefore critical to promote health and safety of HCWs as the country battles out of a third wave of the pandemic.

Purpose: The study sought to ascertain the correlates of HCWs likelihood of participating in a COVID-19 vaccine trial and accepting the vaccine when given the opportunity.

Methods: The study was a web-based cross-sectional survey among HCWs (n=1605) in all sixteen (16) administrative regions in Ghana. Data were analyzed with STATA statistical analysis software (version 14). Chi-square (X²) and Fisher's exact tests were used to test for differences in categorical variables; bivariate probit regression analysis with Average Marginal Effect (AME) was employed to ascertain the determinants of HCWs' likelihood of participating in a COVID-19 vaccine trial and taking the vaccine.

Results: It was found that 48% of HCWs will participate in a COVID-19 vaccine trial when given the opportunity; 70% will accept the COVID-19 vaccine; younger HCWs (AME=0.28, SE=0.16, p< 0.1), non-Christians (AME=21, SE=0.09, p< 0.05) and those who worked in faith-based health facilities (AME=18, SE=0.07, p< 0.05) were more likely to participate in a COVID-19 vaccine trial. Female HCWs (AME=-11, SE=0.04, p< 0.05) and those with lower educational qualification were less likely to accept a COVID-19 vaccine (AME=-0.16, SE=0.08, p< 0.1). Reasons cited for unwillingness to participate in a COVID-19 vaccine trial or uptake the vaccine were mainly fear, safety concerns, mistrust, uncertainty, spiritual and religious beliefs.

Conclusions: Acceptance of the COVID-19 vaccine appear to be high among HCWs; conversely, willingness to volunteer for the vaccine trial was low. Continuous targeted and integrated public health education for HCWs will enhance vaccine acceptability to promote safety and population health in the global south as Ghana intensifies efforts to produce COVID-19 vaccines locally.

The Journey of Getting Cervical Cancer Diagnosis: Experiences of Women in Accra, Ghana

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Background: Majority of cervical cancer cases are diagnosed at the advanced stage in low-income countries. However, early detection and appropriate treatment are possible if robust screening is implemented. There is limited information on the experiences of patients who had undergone cervical cancer diagnosis in sub-Saharan Africa.

Purpose: The current study explored the experiences of women who received cervical cancer diagnoses in Accra, Ghana.

Methods: An exploratory qualitative research method was used in this study. A semi-structured interview guide was used to interview 12 participants to gain an insight into their experiences during the diagnosis of cervical cancer. The data collected were analyzed using content analysis in which major themes and subthemes were generated. These findings were supported with verbatim quotes from the participants.

Results: Two major themes emerged with their corresponding sub-themes. 1. Prolong hospital attendance (subthemes: tired with the hospital, missed diagnosis, late referrals, loss of resources). 2. Pap smear experiences (subthemes: Fear of cancer diagnosis, Pain, Loss of blood, Invasion of privacy).

Conclusion: It takes women with symptoms of cervical cancer several visits to different hospitals to get a diagnosis of cervical cancer in Ghana. Lack of cervical cancer diagnosing knowledge among healthcare providers and test tools accounts for delayed diagnosis of the disease. The findings have implications for training healthcare providers and developing cervical cancer assessment tools to improve cervical cancer management.

An Assessment of Mental Healthcare Financing Strategies and the Free Mental Health Policy of Ghana

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Background: The COVID-19 pandemic highlights greater attention to mental health. However, mental healthcare is poorly funded across the world especially in less endowed countries.

Purpose: This paper assesses Ghana's mental healthcare financing strategies and free mental health policy in the contexts of human capital for development.

Methods: This paper employs archival strategy and confirmatory interviews to elicit data from June, 2021 to December, 2021. The archival strategy examines Ghana's health administrative documents to identify key mental healthcare financing strategies. The confirmatory interviews involve 35 informants in one of the country's three psychiatric hospitals to evaluate the implementation of the strategies from the perspectives of practitioners and beneficiaries (carers). Data was analysed using content and thematic analysis.

Results: Though the country has policies, legal and administrative frameworks for mental healthcare delivery, inadequate funding results in a failure of the country's free mental healthcare policy. Again, the health administrative documents seem to be inconsistent on the inclusion of mental health in the National Health Insurance Scheme and the scheme does not cover mental healthcare in practice while the country's 11-year-old Mental Health Fund remains donordependent.

Conclusion: The study recommends inclusion of mental healthcare in the NHIS; legislated regular flow of money into the Mental Health Fund; and a sin tax on alcoholic beverages for financing mental healthcare. This paper reveals inconsistencies and disparity between practice and provisions of free mental healthcare policy in Ghana. It also reveals failure of public policies due to overreliance on private sector in violation of the principles of market failure.

Perception about Elder Abuse Perpetration among Caregivers of Elderly Persons in Oyo State, Southwest Nigeria

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Background: The global increase in elderly persons has made elder abuse a growing public health concern. Research on elder abuse perpetration among caregivers of elderly persons is scarce.

Purpose: To aid preventive strategies, this study describes elder abuse from the perspective of caregivers of the elderly in southwestern communities of Nigeria.

Methods: Focus group discussions were conducted among adults 18-59 years purposively selected because they provide care for or lived close to an elderly person and analyzed thematically.

Results: Participants stated that religious and cultural norms prohibit elder abuse. Actions such as grumbling, insulting, snapping and shouting at elderly persons were described as verbal abuse. Physical abuse included shoving and beating an elderly person. Neglect comprised refusing to render assistance, cook or carry out chores for an elderly person. Participants believed that relatives of elderly persons were unlikely to perpetrate abuse compared with unrelated neighbours and paid caregivers. They felt children of the elderly person who had been maltreated by their parents in childhood could perpetrate abuse. Identified possible provocation for abuse included an unkempt physical appearance, poor attitude or provocative behaviour in the elderly. Lack of communal unity and mutual respect as well as erosion of cultural values were believed to potentially provoke perpetration of elder abuse.

Conclusions: Moral and religious values, relationship and cultural factors were important in influencing the perpetration of elder abuse. Interventions for preventing elder abuse at the community level can leverage on these.

Mental Health Literacy: A Case Study of Students at (T.I) Ahmadiyya and Kumasi Anglican Senior High Schools, Ghana

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Background: Psychological problems of adolescents are serious global concerns (Khan, 2020). For example, the prevalence of mental disorders was found to be between 16% and 22% among adolescents (Romano et al., 2001). In low and middle-income countries, the prevalence of mental disorders, was found to be as high as 65% (Glozah and Pevalin, 2015). However, studies found high levels of mental health literacy correlate with good health (Jorm, 2012; Kickbusch and Maag, 2008). Mental health literacy can therefore be a remedy for the increasing prevalence of mental disorders as it will lead to early detection of symptoms of mental disorders and seek appropriate help. This study investigated mental health literacy among in-school adolescents.

Methods: The study adopted a descriptive cross-sectional design and recruited 400 respondents who answered a self-developed questionnaire on recognizing specific mental disorders with symptoms guided by the DSM-5 mental disorders diagnosis scale.

Results: The study revealed a low mental health literacy as only less than 18% of the respondents could recognize symptoms of mental disorders.

Conclusion: Mental disorders will continue to increase among adolescents if intensive mental health promotion campaigns are not done to increase mental health literacy among them.

Experiences of Healthcare Workers in Ghana and Kenya during the Covid-19 Pandemic: Implications on Job Satisfaction and Motivation

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Background: Healthcare workers (HCWs) are critical resources for countries during pandemics. In low and middle-income countries (LMICs) such as Ghana and Kenya, HCW's are doubly burdened by pandemic constraints as well as the lack of resources. Key issues, including low levels of perceived preparedness and weakened health care systems, compound the challenges presented by COVID-19 and contribute to healthcare worker stress and burnout. Persistent burnout and stress have significant implications for job satisfaction, motivation, quality of care, and patient mortality and morbidity. Yet, few studies have empirically examined provider stress, burnout, and job satisfaction in sub-Saharan Africa (SSA) during the pandemic. We conducted an online survey during the early phase of the pandemic (April to May 2020) among healthcare workers in Ghana to examine the extent of provider stress, burnout and job satisfaction. Initial data showed high levels of stress and burnout, and associations with low perceived preparedness. The survey was subsequently expanded to include Kenya and conducted during the later phases of the pandemic (November 9, 2020, to March 8, 2021). Further, we conducted in-depth interviews to obtain a nuanced understanding of the impacts of the pandemic on health care workers.

Purpose: The goal of this panel is to present findings from the COVID-19 Preparedness in Africa Study to highlight key gaps and opportunities for pandemic preparedness in Africa.

Questions to be addressed: 1. How did the pandemic impact health care workers with regards to stress, burnout, motivation, and satisfaction, and how did this change over time?

2. What are the factors associated with healthcare worker stress and burnout, and healthcare worker satisfaction and motivation; and how are these factors related to each other?

3. What differences exist between Ghana and Kenya with regards to healthcare worker stress, burnout, motivation, and satisfaction?

Results: The pandemic has negatively impacted job satisfaction and motivation among healthcare workers. Inadequate preparedness, fear of infection, lack of appreciation, stress, and burnout were significant contributing factors.

Conclusion: Given the strained and overburdened healthcare systems, brain drain, and low morale among healthcare workers in SSA, efforts are needed to increase preparedness, better manage stress and burnout, and improve job satisfaction and motivation. Our findings are relevant both for other contexts facing similar resource and human capital constraints, and globally, towards pandemic preparedness. interventions are urgently needed to increase providers' motivations and improve job satisfaction. Governments in SSA should commit to addressing the needs of HCWs to better respond to the ongoing and future pandemics.

Spatial Analysis of Buruli Ulcer among Residents in the Hohoe Municipality

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Background: Buruli ulcer is a neglected tropical disease. The disease is probably the third most common mycobacterial infection in the world today. The first probable case of Buruli ulcer in Ghana was reported in the Greater Accra Region in 1971. The mode of transmission and identifying source reservoirs of *M. ulcerans*, are still largely unknown. Health education and active surveillance remain the cornerstone for control of the disease.

Purpose: To examine the spatial distribution of Buruli Ulcer among residents in Hohoe Municipality.

Methods: A descriptive cross-sectional study design and a matched case control study (1:2) were used. A case search was done in the Hohoe Municipality using total sampling method to select cases and simple random sampling method used to select controls. The study involved 56 suspected cases of Buruli Ulcer to 112 controls. The coordinates of both Buruli Ulcer cases and controls were recorded using the Global Positioning System. Data was also collected with a questionnaire and entered using EpiData Manager version 4.0.2.101 and exported to ArcGIS 10.4 for analysis at a significance level of $p < 0.05$ at 95% confidence interval.

Results: Based on the findings, the sections in the study setting that recorded the highest number of cases included; Kpoeta, 11(20%), Bla, 7 (11.0%), Benua, 6 (10.0) and Azongo 8 (12.0).

Conclusion: The examined the spatial distribution of Buruli Ulcer in the study setting. Based on the findings, the study recommended that, the Surveillance Officer should provide more health education on Buruli Ulcer to improve knowledge of resident.

Determinants of Covid-19 Vaccine Uptake among FSW in Nairobi County, Kenya

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Background: Female sex work has been criminalized in most African countries including Kenya, as a result the sex workers operate in hiding, this hinders them from accessing health care services optimally including HIV prevention, care and treatment yet they carry the countries HIV prevalence burden at 29% compared to general population at 4.9%. University of Manitoba under Partners for Health and Development in Africa (PHDA) is a HIV/STI research center serving approximately 35,000 Female Sex Workers for over four decades. In March of 2020 COVID-19 first positive case was announced in Kenya, this led to restriction of night movement and hot spots closure by the president, adversely affecting sex work times and venues of operation.

Methods: This was an experimental design that utilized mixed methods of data collection. Two sites serving MSM within Nairobi were purposively selected. Eligible MSM who had just enrolled into PrEP within one week were selected through simple random sampling and randomized to either control or intervention arm using computer generated randomization table. The intervention arm received Targeted counselling sessions three times in six months these included; health education on PrEP, depression assessment, alcohol consumption assessment and counselling, substance abuse assessment and counselling and MHealth reminders to honor PrEP clinic appointments. Control arm received PrEP refills and health education with no other intervention as prescribed by the government. Focused group discussion was used to explore drivers to PrEP retention for both arms at baseline and end line. MSM peer leaders and site staff were approached for Key informant Interviews, qualitative data was recorded and thematic analysis done. Quantitative data was collected through semi structured questionnaires. Univariate, bivariate and multivariate data analysis was done. Chi square, McNerna test and regression analysis were used. T test was used to test for differences between the groups. Both groups were followed at month 1, month 3 and month 6 with data being collected at all points and retention analyzed.

Results: A total of 168 MSM were enrolled into the study, 84 on each arm. Retention of MSM on PrEP at month one of the study was 97.6% and 81% in intervention and control arm respectively. At month three retention of MSM to PrEP was 91.7% and 31% in intervention and control arm respectively. At month six the retention went down to 69% and 19% in intervention and control arm respectively. PrEP knowledge among MSM in intervention arm was 37.7% and 83% at baseline and end line respectively. While PrEP knowledge level among the control arm was 44% and 37.5% at baseline and end line respectively.

Conclusion: Targeted counselling is very key in ensuring retention to PrEP program. Poor retention indicates poor adherence to treatment, while good retention might not automatically translate to good PrEP adherence but it increases the chances of one adhering to PrEP, hence increasing the chances of protecting self from contracting HIV.

Herbs, Spirits and Treatment of Gonorrhoea in Ghana: A Focus of the Traditional Health Practitioner

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Background: Since time immemorial, several communities have resorted to spirits and plants as sources of healing therapies. Two-thirds of the world's population relies on herbal medication as the first point of medication or visit traditional health practitioners to treat diseases including sexually transmitted infections. The cosmovision approach was applied to explore the treatment of gonorrhoea at selected traditional health facilities in the Central Region, Ghana.

Purpose: Obtaining information on STIs and the methods of their prevention and treatment is one of the most important issues that everyone should be aware of. However, much has not been done on therapeutic methods of traditional medicine to treat common sexually transmitted infections such as gonorrhoea. This study, therefore, explores the processes involved in the treatment of gonorrhoea.

Methods: Data were collected with the in-depth interview guide from twenty traditional health practitioners who were selected purposively. Lucey and Luff's five-staged framework underpinned the analysis of the data.

Results: Eleven herbs belonging to the Solanaceae, Zingiberaceae, Urticaceae, Tiliaceae, Phyllanthaceae, Araceae, Myrtaceae, Asteraceae and Caricaceae families were named as effective for treating gonorrhoea. The treatment regime encompasses interconnections of one's biopsychosocial and spiritual background. A five-staged treatment process - revelation about the client, diagnosis to establishing the causes of infection, application of treatment therapy, review and confirmation of treatment comprised the treatment, was generally applied

Conclusion: Treatment of gonorrhoea consist of both spiritual and physical processes which connect the three dimensions of man as well as the cosmovision of the healers. The use of herbs remains a crucial element in healthcare delivery in many communities in the Central region of Ghana.

Factors Associated with Provision of Person-Centered Maternity Care: A Cross-Sectional Study with Maternity Providers in Kenya and Ghana

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Background: Person-centered maternity care (PCMC), which refers to care that is respectful and responsive to women's preferences needs, and values, is core to high-quality maternal and child health. Yet, a growing body of evidence shows that globally women are not receiving PCMC.

Purpose: In this study, we seek to understand the factors contributing to poor PCMC from the perspective of providers.

Methods: We used data from two cross-sectional surveys with 236 maternity providers from Ghana (N=150) and Kenya (N=86). The quantitative survey included a 9-item provider reported PCMC scale; situationally specific vignettes to assess explicit bias in PCMC provision and an Implicit Association Test (IAT) to assess implicit SES bias; validated psychosocial measures of perceived stress and burnout; as well as several other potential predictors of PCMC.

Results: The average standardized PCMC score for the combined sample was 66.8 (SD=14.7), with a score of 58.9 (SD=15.1) among the Kenya health workers and 71.3 (SD=12.3) among those in Ghana. In multivariate analysis, PCMC decreased with increasing report of stress and burnout. Compared to providers with no burnout, providers with burnout had lower average PCMC scores ($\beta = -7.30$, 95%CI: -11.19, -3.40 for low burnout and $\beta = -10.86$, 95%CI: -17.21, -4.51 for high burnout). Burnout accounted for over half of the effect of perceived stress on PCMC. Other factors associated with PCMC were training on stress and interpersonal interactions with patients, facility type, and number of providers usually on duty.

Conclusion: Provider self-reports confirm sub-optimal PCMC reported in prior studies with women and highlight the need for interventions to improve PCMC. Provider burnout is a key driver of poor PCMC that needs to be addressed in interventions to improve PCMC.

Pre-Operative Experiences and Expectations of Patients at the Suntreso District Hospital in Ghana – A Phenomenological Study

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Background: Patients' pre-operative experiences and expectations are important because it has a part to play in the post-operative experiences of patients. To alleviate anxiety and also support postoperative recovery, sufficient information should be provided to patients during the preoperative process.

Purpose: The study objective was to explore the experiences and expectations of patients about pre-operative care.

Methods: A qualitative interview study with an exploratory and descriptive design was used. Participants were surgical patients in Suntreso Hospital in Ghana who were to undergo surgery, and those who had undergone surgery. The study included 13 participants who were 18 years or older. These participants were purposively selected to ensure variation in dataset. Interview guide and electronic recorders were used to gather data from participants which were transcribed verbatim and analyzed under themes and subthemes.

Results: Two themes and five subthemes emerged from this data: (1) "Psychological well-being" as a theme with subthemes: Participants' mental and emotional health states, as well as their expectations prior to the timely intervention provided by health professionals, are described; (2) the theme Health System Factors, with subthemes Health Education and Attitude of Health Personnel, where participants hinted at the type of pre-operative education they received from nurses and health professionals, is highlighted; all of the themes are highlighted to depict participants' preoperative experiences and expectations.

Conclusion: The findings of this study revealed that despite the fears (anxiety and worry), as well as surgical insecurity, experienced by most people prior to surgery, participants were satisfied with the pre-operative care (emotional, spiritual, nutritional, and material) they received from the health workers and caretakers.

Keywords: Experiences, Expectations, Pre-operative, Surgery

The Extent of Self-Reported Impact of Covid-19 on Daily Life and Income among University Students in Kumasi, Ghana

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Background: Students at universities are becoming recognized as a vulnerable populace, with much greater rates of depression and workload/activities than the overall population. Thus, when the quality of their educational experience is fundamentally altered—for example, through the implementation of online classrooms or through modifications to routine daily living activities in accordance with COVID-19 pandemic safety protocols—the burden on this vulnerable group is magnified.

Purpose: As such, the present research intends to document the extent of self-reported impact on university students' everyday lives and income.

Methods: In August of 2021, a countrywide cross-sectional, self-administered internet-based poll was conducted. The data was retrieved from the internet using Microsoft Excel and then analyzed using STATA software version 14. Self-reported impact of Covid-19 on university students was investigated using univariate and logistic regression analysis, with a p-value < 0.05 regarded statistically significant (*).

Results: The study included 430 participants, most of whom were single (98.6%), young adults (89.8%), and Christians (90.7%). This survey found that 52.1 % said the Covid-19 epidemic has a highly significant impact on their daily activities and income. There was no significant association between self-reported negative impact and other research variable, except for marital status ($p=0.043$) and perceived risk Covid-19 infection ($p<0.00$). However, the multivariate analysis depicts that, only students with perceived risk of covid-19 infection tend to be high to very high affected by the pandemic on their everyday activities and income (Adj. OR = 2.516, 95CI% = 1.551-4.081, $p<0.000$).

Conclusion: This study revealed a relatively fairly (52.1%) negative impact on daily activities and income among Ghanaian university students. With this in mind, Ghana must improve public educational provision as well as provide incentives to help university students. The findings of this survey may be used to forecast the pandemic's impact in the future.

Keywords: COVID-19, Daily life, Income, Students, Ghana

The Uptake of Key Interventions among Pregnant Women attending Antenatal Clinic at the University Hospital - KNUST, Kumasi

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Background: Maternal health remains a priority under the Sustainable Development Goals. **Purpose:** This study aimed at assessing the utilization of antenatal clinic (ANC) visits and interventions such as iron-folic acid supplementation (IFAS), intermittent preventive treatment of malaria (SP-IPTp) and deworming undertaken.

Methods: Using a descriptive cross-sectional study design, 200 pregnant women of diverse gestation attending ANC at the University Hospital, KNUST in Kumasi-Ghana were studied and responses were analysed using STATA 16.

Results: An average of four (4) antenatal clinic visits were found with a significant association found between ANC attendance and gestation ($p < 0.001$). The coverage of SP-IPTp (92.50%) and IFAS (98.50%) interventions were high but deworming (5.00%) was very low at the antenatal clinic. High adequate uptake of IFAS (81.50%) was found significantly associated with knowledge of the medication, and absorption of at least three (3) IFAS ($p < 0.05$). Low uptake of SP-IPTp (48.00%) with 31.50% prevalence of SP-3 and low uptake deworming (12.50%) were found. Financial problem (62.07%) was the major barrier to keeping ANC appointments, forgetfulness (31.82%) the major barrier to those of low uptake of IFAS, and unavailability of the medication at the ANC the major barrier to uptake of SP-IPTp and deworming intervention.

Conclusion: Medication surveillance programs investigating the causes of stock outs of key interventions at ANCs must be implemented as well as ensuring maternal health education targeting the significance of ANC visits.

Keywords: Interventions, Antenatal Clinic (ANC), IFAS, SP-IPTp, Deworming, Ghana

Factors Contributing to the Default of Sulphadoxine-Pyrimethamine for Intermittent Preventive Treatment of Malaria among Pregnant Women in the Kwadaso Municipality

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Background: Extensive research studies have been conducted to determine the recommended optimal dose of IPTp-SP. However, there is little research on why pregnant women skip doses during the possible monthly ANC visits from the 2nd trimester till delivery.

Purpose: As a result, the research focused on IPTp-SP missed dosage (s) and associated influential factors.

Methods: A cross-sectional study design was used to interview 272 pregnant women using a researcher-administered questionnaire.

Results: were 2, 9 and 6 for ANC visits; 1, 6 and 3 for IPTp-SP dose; 0, 5 and 3 for IPTp-SP Defaults; 138 (50.2%) and 134 (49.8%) for (Zero default coded as “1” and ≥ 1 default coded as “0”) respectively. Significant factors that contribute to IPTp-SP Default were age group (20-29), multi gravida, less than 6 ANC visits, and 3+ IPTp-SP whereas DOT contribute to reducing default. In line with Bouyou-Akotet et al., (2013), the number of ANC visits made is a major determinant of IPTp-SP uptake.

Conclusion: Findings and discussions from responses and literature works reveal different forms of gaps and lapses in the delivery of IPTp-SP services in the Kwadaso Municipality. It is needful to educate the pregnant women on the prevailing new WHO recommendation that challenge adherence and compliance practices such as direct observe therapy (DOT) as well as education to intensify on the importance and essential benefits of ANC services.

Keywords: Antenatal Clinic (ANC), IPTp-SP, Direct Observe Therapy (DOT) Ghana

In Vitro and in Vivo Antiplasmodial Activity of B-Amyrin and its in Silico Plasmodium Falciparum Target(S) Prediction

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Background: Malaria continues to be a global health menace and it continues to be a re-emerging infection because of the resistive nature of some of the parasitic strains especially in Africa. This calls for response strategies like chemotherapy and drug discoveries.

Purpose: The present study investigated the prospects of β -amyrin as an antimalarial agent using in vitro, in vivo and in silico methods.

Methods: The antiplasmodial activity of β -amyrin and artesunate was evaluated in vitro using multidrug-resistant strains of *Plasmodium falciparum* (Pf), Dd2, and in mice infected with *Plasmodium berghei* ANKA (PbA). The in vivo antiplasmodial assessment involves determination of their effects on parasitaemia, body weight, liver histology and post-treatment survival. To identify possible antiplasmodial mechanism of β -amyrin, some molecular targets derived from Pf were evaluated in silico using UCSF Chimera, AutoDock Vina and Discovery Studio (BIOVIA) softwares.

Results: β -amyrin and artesunate exhibited potent activity against Pf with IC₅₀ of 13.34 and 6.15 μ g/ml respectively. The ED₅₀ for β -amyrin and artesunate in mice is 16.77 ± 1.11 and 1.75 ± 1.08 mg/kg, respectively. Both drugs significantly reduced weight loss, offered protection against liver injury and increased survival of infected mice. Molecular docking revealed that Enoyl-acylcarrier-protein reductase (PfENR) is a possible target for β -amyrin.

Conclusion: β -amyrin and artesunate exhibited potent activity against Pf in vitro and PbA in vivo. PfENR may be a likely target for β -amyrin in exerting its antiplasmodial effect. Further work is required to validate the activity of β -amyrin at PfENR and identify other possible targets.

To Take or not to Take: Determinants of Student's Preparedness to take Covid-19 Jabs in the University of Cape Coast, Ghana

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Background: The decision to take or not to take the sequential COVID-19 jabs may be one of the most critical concerns in the midst of the pandemic.

Purpose: The study examined the determinants of students preparedness to get vaccinated. Essentially, factors which could influence the decision to take the jab were tested.

Methods: The quantitative approach guides the explanatory research design to obtain data from 230 University of Cape Coast students who were randomly selected for the study.

Results: The study concluded that students have requisite knowledge about COVID-19 vaccines which was generally acquired via television and radio stations. Although students have knowledge about the existence of vaccines, the larger proportion of them have not taken the jab. The overarching reason was their concern about the side effects of taking the vaccine. Students, who had not been vaccinated, indicated that they needed approximately five months to be fully prepared to take the vaccine. The study further concluded that students shared similar beliefs and attitudes toward taking the COVID-19 vaccine regardless of their socio-demographic characteristics and differences. In relation to socio-cultural factors that influenced their preparedness to take the jab, the study depicted that the most reliable predictors, in accordance to their effects, were fair distribution of vaccines across region, preference for local medication and attitudes and beliefs toward vaccines.

Conclusion: The study therefore recommended that the Ghana Health Service and community leaders should mount more vaccine centres closer to students' residents in order to bridge the distance gap and promote easy accessibility.

Keywords: COVID-19, Vaccination, Attitudes, Socio-Cultural, Determinants

An Evaluation of the Tuberculosis Surveillance System in the La Nkwantanang Madina Municipality during the Covid-19 Pandemic

Alex Ansah Owusu

Background: Public Health Surveillance is the ongoing systematic identification, collection, collation, analysis and interpretation of disease occurrence and public health event data, for the purposes of taking timely and robust action, such as disseminating the resulting information to the relevant people, for effective and appropriate action. Tuberculosis is an infectious disease caused by the micro-organism *Mycobacterium tuberculosis*.

Purpose: To describe the operation of the TB surveillance system at LANMMA, describe the performance of the TB surveillance system in LANMMA using system attributes and identify any gaps in the TB surveillance system in LANMMA and make appropriate recommendations

Methods: This study employed a mixed method, using both qualitative and quantitative methods. The process was guided by the Updated Centres for Disease Control and Prevention (CDC) Surveillance Evaluation Guidelines.

Results: The system was found to be useful for planning, monitoring and evaluation of TB control activities as well as development of priorities for TB control programmes. The system was found to be simple and flexible with good data quality. However, stability, sensitivity (44.2%), predictive value positive (8.7%) and acceptability were all found to be poor. Even though downstream flow of information was found to be excellent, upstream flow of information was found to be very poor.

Conclusion: It was concluded that, the system was performing poorly. The system was not achieving most of the objectives for which it was set up and needed improvement.

Association of Sociodemographic Factors with Knowledge and Compliance to Standard Precautions Measures amongst Student Nurses in Eswatini University

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Background: Standard precautions are used in the clinical area to prevent the spread of infection amongst patients. Knowledge and compliance to standard precaution measures among healthcare workers including student nurses is very important. How much student nurses know and comply to standard precautions measures may vary according to their study level, gender, age and marital status.

Purpose: To assess the association of sociodemographic factors with knowledge and compliance to standard precautions measures amongst student nurses in Eswatini university.

Methods: A non-experimental quantitative approach was used. Census sampling method was applied to select 3rd, 4th and 5th year student nurses. Association of sociodemographic with knowledge and compliance to standard precautions measures was done using analysis of variables (ANOVA) and chi-square tests.

Results: Sociodemographic factors significantly associated with knowledge and compliance to standard precautions measures were age, gender, study level and marital status. Regarding knowledge the male students scored 91.8%, female 90.4%. The 25-29 years scored 93%, while 40-44 years was at 85%. Single students scored 91.6%, married students 89.3%. On level of study, 3rd year students were at 92%, 4th year at 91% and 5th year 89.1%. Regarding compliance to standard precautions male students scored 2.31%, female 2.28%. Students between 25-29 years 2.34%, while 40-44 was 2.18%. Single students 2.3%, married 2.2%. Fourth year student's 2.33%, fifth year 2.27%, third-year 2.22%.

Conclusion: Inadequate knowledge and compliance to standard precautionary among nursing students remains a concern. The standard precautions should be taught and demonstrated to student nurses in the skills laboratory and that clinical facilitators should accompany students in the clinical area.

Keywords: Compliance, Eswatini University, Knowledge, Sociodemographic, Standard precautions, Student nurses

Health Systems Resilience in Contexts of Unequal Chances in Access to Health Insurance in Nigeria

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Background: The relevance of universal health coverage (UHC) as a measure designed to ensure that all people have access to essential health services without enduring financial hardship, have no doubt continue to create argument on its effectiveness as a measure that could bridge the prevailing unequal chances in health access among different income in Nigeria. Health financial resilience to manage these unequal chances in health access has also not been adequate to support most income groups in Nigeria hence, have been a major health care financial issue.

Purpose: This study however, investigated the effects of health system resilience and access to health insurance on households' health care cost among different income groups in Nigeria.

Methods: The studied used the World Bank Financial Inclusion Survey (2020) known as the Global Findex database which provides in-depth data on households' financial resilience to health shocks.

Results: The propensity scores matching estimation techniques and the descriptive statistics shows that health system resilience and unequal chances in health access through health insurance is gradually creating a huge care trap for many income groups in Nigeria. This further is adding to the rising out-of-pocket health expenditure and rising poverty.

Conclusion: There is urgent need to declare emergence in health sectors in Nigeria with the rising private health financing measure as result of unequal chances in health access. There is need to strengthen public health care system in providing equal chances in health access among different income in Nigeria.

Mental Health and Substance Abuse among Adolescents: Literature Review

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Background: Adolescence is a time of experimentation, exploration, curiosity and identity search, which involves some risk-taking, including the use and abuse of substances, which result in sedation, stimulation or change in mood of an individual. It is also a time when both mental health and substance abuse problems commonly first emerge and as a result, symptoms are often mistaken for the normative anxiety and emotional instability in young people.

Purpose: The purpose of this paper was to review existing evidence in order to address adolescence mental health and substance abuse.

Methods: The authors searched databases PubMed, CINAHL, EBSCOhost, and Google Scholar. Articles were screened according to the following inclusion criteria: qualitative, quantitative or mixed methods research, using a population of higher education students, published between 2008 and 2020, written in English.

Results: Two themes emerged, namely, risk factors that increase the demand for alcohol use, and protective factors that reduce the demand for alcohol use among students. The subthemes revealed intrapersonal, interpersonal, and environmental risk and protective factors.

Conclusion: The co-occurrence of mental health and substance use disorders among adolescents are of great concern. Clinical, research, and policy distinctions traditionally separate their treatment, despite the fact that both are psychiatric conditions. A comprehensive integrated treatment programs appear to be the most effective method of treating co-occurring disorders in adolescents.

Parental Involvement in the Sex Education of Adolescents with Disabilities in the Ejisu-Juaben Municipality

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Background: Adolescents with disabilities (AWDs) like those without disabilities, transit from adolescence into adulthood. During the transition period, they become sexually active, develop romantic and sexual relationships and also explore their sexual identity. Due to AWDs less knowledge on sexual health they are vulnerable, more at risk and victims of sexual abuse, unplanned pregnancies and unsafe abortions. Although the importance of sex education for adolescents is acknowledged to help them gain knowledge on sexual health and development, it is less in many countries, especially those in Africa. Parents have been identified as the primary sex educators of adolescents in the transition period. But in Ghana and some other countries, parents think that sexual conversation with AWDs will introduce them to early sex.

Purpose: This study aimed to explore parental involvement in the sex education of adolescents with disabilities in the Ejisujuaben Municipality.

Methods: This was a cross-sectional study, respondents were drawn from a pool of parents of adolescents with disabilities at the Ejisu-Juaben Municipality between August to September, 2021. The study randomly recruited 81 parents who consented to participate in the study. A questionnaire prepared by the researcher according to literature were used in the study. Data was managed and analyzed using STATA 16. Categorical variables were summarized using frequency and percentages while continuous variables were summarized using mean and standard deviation

Results: The average age of parents was 50 years ± 12.1 years. Over half (51.9%) were physically disabled, deaf (28.4%), 8.6% were intellectually disabled; those being blind were the least (4.9%) of them. Generally, parents of AWDs have good perception about disabled persons sexuality. They also have good perception about sex education for AWDs. Factors such as age of the child, sex of the child, sex of the parent and disability type influenced parents' involvement in the sex education of AWDs. Inability to communicate sexual matters due to child impairment, the right information to provide and limited knowledge to explain sexual topics were identified as the major barrier for lack of parents' participation in sex education of AWDs.

Conclusion: This study demonstrated that, though a substantial proportion of parents were aware of the importance of sex education, yet not all of them were able to effectively initiate discussion on sexual related issues with their AWDs. Parents still have challenges discussing sexual topics with their AWDs; hence it is very critical that parents be equipped on the need to effectively discuss such sensitive subjects to help improve the sexual behaviors of disabled adolescents.

Keywords: sex education, disabled adolescents, parents, perception, barriers.

Interdisciplinary Intervention to Reduce Poverty and Undernutrition in Kigezi, Uganda: The Rabbit Breeding Project

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Background: Undernutrition and poverty are longstanding barriers to receiving Primary Health Care (PHC) services in Uganda. High prevalence of child malnutrition (80% attributable to lack of protein in the diet) contributes to the significance of these barriers. Rabbit meat is a highly nutritious meat, noted for having high percentage of protein, low percentage of fat, and caloric similarity to chicken.

Purpose: The Rabbit Breeding Project is an interdisciplinary intervention designed to reduce malnutrition and poverty in Kigezi, Uganda. The nutritious value of rabbit meat provides an opportunity to distribute a nutritious food source to Kigezi residents. Alongside this nutritional value, economic value is incorporated into the program through establishing a commercial market for the rabbit meat.

Methods: The team includes clinicians, veterinarians, monitoring and evaluation, academia, and community-based organizations. Training, supplies, and technical support are provided to families for rabbit breeding and care. Commercial partnerships were established to create markets for rabbit meat, providing economic opportunity. Academic partnership with Northwestern to integrate implementation research to measure implementation and effectiveness.

Results: The Rabbit Breeding Project has made progress towards SDGs 2 (zero hunger), 3 (good health and well-being), and 8 (decent work and economic growth). The Rabbit Breeding Project has successfully distributed rabbits to over ten thousand families. Multidisciplinary partnerships have led to the adoption of integrated implementation research framework.

Conclusion: Interdisciplinary collaboration resulted in successful design and initial implementation with plans to scale up the project. Researching implementation concurrently with the project's operations leads to bettered understanding of the effect.

Using Embedded Implementation Research to Guide Interdisciplinary Evaluation: the Rabbit Breeding Project in Southwestern Uganda

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Background: In 2012, KHEFO in Southwestern Uganda began the design to test the implementation and outcomes of a rabbit breeding intervention for consumption to reduce malnutrition and generate income for families typically living on less than one dollar a day. The intervention builds upon the Uganda team's prior field experience of rabbit breeding and work to engage companies in promoting rabbit processing for a bigger consumer market, involving a range of disciplines from clinical, marketing, veterinary and community outreach. This project aims to address the Sustainable Development Goals by reducing poverty, providing sustainable food sources, promoting health, and creating global sustainable partnerships.

Purpose: Research is often separated from implementation which can result in missed opportunities to use emerging knowledge to understand and improve process and outcomes. Traditional research methods are also not always interdisciplinary, missing the input of key stakeholders. Implementation research focuses on understanding the determinants and outcomes of implementing interventions and developing strategies to address barriers and inform improvement and scale.

Methods: There was a recognized need to create a strategic evaluation that would understand the outcomes, address barriers and inform future scale for this project. Continuing the interdisciplinary approach, we brought together a partnership of implementers, academics from Uganda and United States, and master's students to use implementation research to understand challenges, barriers, and implementation and effectiveness outcomes of the project

Results: The interdisciplinary panel will discuss the success in developing embedded implementation research integrated into monitoring and evaluation of the Rabbit Breeding nutrition and poverty reduction project. The panel will be moderated by the project lead, Dr Anguyo, who will introduce partnership designed to provide actionable data during implementation, build capacity for implementation research, and ensure key stakeholders are represented in the study and findings for scale-up and adaptation. Dr. Hirschhorn will then provide a brief introduction on implementation research, followed by Dr. Steker who will provide an overview of the pilot rabbit breeding. Mr. Arnold will discuss the importance of multidisciplinary stakeholder engagement and the interdisciplinary team and strategies needed to include the range of implementers, academics from Uganda and the US, implementation researchers, veterinarians, and clinicians. Finally, Ms. Dworkin will provide a summary of the implementation research design and metrics.

Conclusion: The partnership goal is to provide actionable data during implementation, build capacity for implementation research, and ensure key stakeholders are represented in the study and dissemination of the findings for scale-up and adaptation.

Knowledge, Attitude and Practice of Mothers Regarding under five Nutrition: Key Policy Recommendations

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Background: Under-five nutrition among children is of great importance since it sets the foundation of lifetime health, strength, intelligence, and vitality for children. Children under-five are constrained by nutritional deficiencies which are common. Anthropometric assessment shows under-nutrition is common among pre-school age in Ghana. Adequate knowledge, attitude and practices of mothers on nutritional practices play a significant role to maintain the nutritional status of the children.

Purpose: Our aim was to investigate the knowledge, attitude and practices of mothers with children under five and document constraints and policy recommendations in the Mamprobi Polyclinic in the Greater Accra, Region.

Methods: We conducted a cross-sectional survey among 150 mothers with under-five children who participated in a child welfare clinic in Mamprobi Polyclinic. We adopted and deployed a structured questionnaire based on KAP survey guidelines but relevant to the setting. The survey was categorized into four sections which were used to investigate nutrition knowledge, attitude and practices of under-five children.

Results: We enrolled 150 mothers in the study. Majority of mothers surveyed knew the nutritional values relevant to the growth of under-five children. Mothers were stronger to prioritize feeding the child with available food. Mothers' educational level is likely to influence the feeding outcome of under-five children.

Conclusion: Dietary patterns of children under-five years is better enhanced with adequate knowledge, attitude and practices of mothers. Service providers should consider strengthening capacities of Community Health Workers (CHW) on essential nutrition action with focus on household counseling.

Perception and Attitude of Mothers towards Use of Chlorhexidine-Gel for Umbilical Cord Care During Ante-Natal and Post-Natal Care Sessions at South West Hospital, Nigeria

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Background: The use of chlorhexidine-gel for neonate during the first week of life is an important strategy for prevention of sepsis, the leading cause of neonatal mortality and also a means of achieving optimal cord care. This study examined the perception and mothers of chlorhexidine-gel for umbilical cord care attending ante-natal and post-natal care at Somolu General Hospital, Lagos State.

Purpose: The broad objective was to examine the perception and mothers of chlorhexidine-gel for umbilical cord care attending ante-natal and post-natal care attending antenatal and post-natal care at Somolu General Hospital, Lagos State. The specific objectives are to assess the level of knowledge on the use of chlorhexidine-gel for cord care, evaluate the current practice in use of chlorhexidine-gel mother's, determine the attitudes towards use of chlorhexidine-gel and assess the perceptions regarding the effectiveness of chlorhexidine-gel among mother's attending ante-natal and post-natal care.

Methods: This study employed a descriptive survey approach. Two hundred twenty-seven (227) nursing mothers participated in this study and simple random sample technique was used to select the respondents from the study setting Questionnaire was used for data collection and data analysis was done with Statistical Package for Social Sciences (SPSS) version 25.0.

Results: findings from this study revealed that, there is statistically significant difference between level of knowledge and practice of the use as well as knowledge and attitudes on the use of chlorhexidine-gel for cord care among mother's attending ante-natal and post-natal care ($P=0.000$, $P<0.05$).

Conclusion: It was concluded that most of newborn infants of the mothers who attend ante-natal and post-natal care in the study area are exposed to the utilization of chlorhexidine-gel for umbilical cord care. It was recommended amongst others that awareness should be created to the general public on the benefits of use of chlorhexidine gluconate for cord care through media like television, radio, and visual aids in hospitals.

Keywords: perception, attitude, chlorhexidine-gel, umbilical cord care, ante-natal care, postnatal care

Exploring Challenges for Managing Chronic Health Conditions - At the Last Mile. Lamu, Kenya

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Background: The global burden of non-communicable disease (NCD) is well documented by WHO and within Kenya, where NCDs account for 39% of deaths(1,2) . Reducing this figure is a UN sustainable development goal(3) . Safari Doctors is a community-based social enterprise in Lamu, Kenya working to improve universal health access (UHC) by innovative, community-driven healthcare solutions for the marginalized. To our knowledge, a survey of NCD management in Lamu County has not been completed.

Purpose: We aim to assess the baseline understanding of NCD, barriers to adherence and access of medication in isolated communities, in order to design interventions for improving disease control.

Methods: Patients with chronic disease attending outreach clinics during January and February 2022 were interviewed using 'Kobo Toolbox', an offline data collection tool. Diseases included were hypertension, diabetes, asthma and epilepsy. Interviews were based on knowledge of disease, compliance and access to medications.

Results: 1925 patients were seen in outreach clinics of which 8% had chronic diseases. 74 surveys were completed, representing 45% of all chronic disease patients. 77% reported not taking their medication daily, the most commonly cited reason (66%) was difficulty in accessing. 42% were unaware of what medication they were taking. It was found that 89% of hypertensives had uncontrolled blood pressure, demonstrating translation of poor treatment to clinical findings.

Conclusion: There is a high prevalence of unmanaged chronic illnesses in the remote areas where UHC remains a challenge. We found access to medication is the greatest barrier to healthcare management.

Strengthening Research through African Diaspora Organization through Medical Education and Research Strengthening Initiative (MERSI)

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Background: Development of medical education and research in low to middle-income countries (LMIC) is a key pillar of global health advancement. Many institutions from higher income countries, such as the United States, have attempted to assist in strengthening capacity building in these developing countries, but certain challenges have presented and are in need to be addressed. Medical Diasporas have been shown to be a valuable resource that has the potential to turn the “brain drain” phenomenon into “brain sharing” across the global health community. This makes them capable of addressing certain challenges. A new collaborative model of interventions utilizing a joined pool of professional organizations in diaspora, their expertise, and their proximity to resources in partnership with a spectrum of partners in Sudan extending from undergraduate, graduate, and professional groups in medical education and research.

Purpose: To develop a pilot research strengthening interventions utilizing interprofessional professional team in diaspora.

Methods: We developed two courses, the first a six-week virtual research strengthening training course from April 2021-May 2021. The training included lectures, problem-based learning, team-based learning activities and research mentoring. The second a research Thesis supervision best practice March 26th -27 th 2022. These courses were coordinated by a team of professionals from diaspora organizations across three continents utilizing resources from HIC. The contents were selected by the local partners, Sudanese Medical Specialty Board and participating faculty in diaspora and modified to fit the local context.

Results: Participants identified gain in knowledge and intent to apply what they learned in their research practice. Participants also have shared barriers to health research activities to address in subsequent courses.

Conclusion: In this presentation we will share the course outcomes and insights learned from our experience and reflect on strategies for sustainable contributions by diaspora in the setting of short- and long-term research strengthening activities in resource limited settings.

Knowledge and Practices of Infection Prevention among Health Workers at Police Training School 11, Ebola Treatment Centre, Hastings, Freetown, Sierra Leone

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Background: Africa recorded the highest cases and deaths from the recent Ebola outbreak in the world, with West Africa accounting for 28, 639 cases (99.9%) and 11,322 deaths (99.99%) (WHO, 2014). The frontline-healthcare workers, who are often times the first point of call in delivering care to the sick, are at higher risk of being infected. There was significant increase in the number of cases and death recorded among the health workers due to many reasons including negligence and ignorance (Piot, Muyembe & Edmunds, 2014; Ulrich, 2014). According to the data available at the treatment centers in Sierra Leone, Ebola transmission among health workers had been identified among 66 health workers which include doctors, nurses, biomedical scientists, surveillance staff, support staff and administrative staff although they have been trained in infection prevention practices. If staff are trained in infection prevention and control practices, the why were they still getting infected?

Purpose: This gap in infection prevention and control training and practices among health workers directed the study to assess Knowledge and Practices of infection prevention among health workers at Police Training School 11, Ebola Treatment Centre, Hastings, Freetown, Sierra Leone.

Methods: A quantitative research approach was used for the study. a purposive sampling method was used to sample all 66 health workers at the ETU. The study was conducted among the health workers at the Police Training School 2 (PTS11) ETC at Hastings in the Western area of Sierra Leone. A structured questionnaire was used collect information from respondents. The questionnaire was divided into three portions. The first part being the socio-demographic data, knowledge being the second part and practices on Infection Prevention Control measures being the third part. Analysis was done using SPSS version 21. Descriptive statistics including percentages, mean, standard deviation, and inferential statistics including chi square, regression analysis were used for the study.

Results: The findings revealed that although 92.4% of respondents claimed to have been trained in IPC before posted to the ETU, many did not adhere to basic IPC protocols prescribed by the WHO. A significant number of clients did not know how long they had to wash their hands or use alcohol-based hand sanitizers. Discrepancies exists between WHO approved IPC standards and that practiced at the ETU. In addition, there is lack of knowledge on basic IPC standards which poses serious threats to health staff.

Conclusion: The perceived gaps in IPC serve as channels through which interventions can be made to reduce rate of health staff infection in an outbreak situation. A number of health staff do not strictly adhere to IPC standards therefore making them very susceptible to infections.

Keywords: Personal protective equipment, Hand hygiene, Sharp disposal.

Factors Affecting the Utilization of Screening Services for Cervical Cancer among Women in the Cape Coast Metropolis, Ghana

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Background: Cancer of the Cervix is a malignant cell growth in the lower part of the uterus that opens into the vagina. Ever-sexually active women are at risk of cervical cancer, one of the most common female reproductive cancers as it is caused by the sexually transmitted HPV, which is the most common viral infection of the reproductive tract. Cervical cancer is the second most common cancer in women worldwide, and the seventh overall. Cervical cancer is a major global health problem, with nearly 528,000 new cases occurring each year worldwide. Each year an estimated 275,000 women die from the disease with about 86% of the cases occurring in developing countries, representing 13% of female cancers. According to World Health Organization (2018), an estimated 569,847 new cases and 311,365 deaths of cervical cancer were recorded worldwide. Cervical cancer is preventable and treatable yet more than a million women in the world are living with cervical cancer and most of them have no access to screening, treatment and palliative care, resulting in late treatment. Cervical cancer usually develops slowly, which means that most cases can be identified and managed when screening is performed regularly. Yet, because of poor access to screening and treatment services, the vast majority of deaths occur in women living in low- and middle-income countries. Effective methods for early detection of precancerous lesions using cytology (Pap smear) exist and have been shown to be successful in high income countries. However, competing health care priorities, insufficient financial resources, weak health systems, and limited numbers of trained providers have made high coverage for cervical cancer screening in most low- and middle-income countries difficult to achieve (WHO, 2013).

Purpose: The purpose of the study was to assess women's awareness, attitudes and experiences regarding cervical cancer testing and screening services among women in the Cape Coast Metropolis, Ghana and to better understand those factors influencing access to and utilization of the cervical cancer screening services by these women.

Methods: The study method employed was a cross-sectional descriptive study design as it would adopt quantitative approach through self-administered questionnaires. The study population was women aged 18 to 60 years of age in the Cape Coast metropolis, Ghana. Simple random sampling was used to select the areas of the study and a systematic random sampling was used to select the 332 respondents from 5 different areas in Cape Coast Metropolis. Data from the respondents was analyzed using Statistical Package of Social Sciences (SPSS) version 22.0 in conjunction with Microsoft excel 2019.

Results: This study revealed a very high awareness of cervical cancer among the participants. A percentage of 86.5 of the study participants reported that they had heard of cervical cancer. Despite the fact that more than half of the participants were aware of cervical cancer in this study, only 11.5% had been screened for the cancer and majority of them said they did not know where the screening was done. The study examined association of study participants' background characteristics with awareness of cervical cancer and educational level ($p < 0.034$) as significantly associated with awareness of cervical cancer.

Conclusion: Despite the great knowledge on cervical cancer, utilization of the screening services were poor which may be due to inadequate facilities performing such function as well as the cost of the services provided. Moving forward, such services could be provided in most

of the public facilities at the lowest possible cost and even at the private facilities with the NHIS covering some aspect of the cost.

Assessment of Knowledge, Perceptions and Beliefs towards Universal Safety Precautions and Vaccine Acceptance in Ghana

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Background: SARS-CoV-2 the virus that causes COVID-19 has rapidly spread across every country in the world. Mitigation measures introduced by WHO and implemented by member countries were the Universal Safety Protocols (USPs) to slow down the spread of the COVID-19 all over the world.

Purpose: To delved into knowledge, opinions, and practices of the universal safety protocols and vaccine acceptance in Ghana to avert the spread of COVID-19.

Methods: A descriptive cross-sectional, online/web based quantitative survey was conducted to collect quantitative data regarding COVID-19 USPs and sustaining mitigating measures towards COVID-19 and factors affecting vaccine acceptance among Ghanaians with access to the internet and/or social media platforms. A total of 2,500 respondents were reached out using google forms. The study measured participants' knowledge on common COVID-19 mitigation measures and vaccine knowledge and acceptance. The factors influencing knowledge and adherence to USPs measures were identified using binary logistic regression analysis and represented as odds ratios with 95% CIs. P-values < 0.05 with statistically significant.

Results: Overall, knowledge of COVID-19 mitigation measures was high among young people. Age, occupation, and educational status were found to be statistically significant with USPs adherence with p-values of 0.000, 0.008, and 0.000 respectively. whilst perception about vaccine safety were found to be statistically significant among age group 18 – 24, with p-value=0.011.

Conclusion: Findings from the study have provided rich data on the opportunities and challenges presented by COVID-19 for future outbreak and how to be prepared to face future outbreaks of infectious nature.

Lived Experiences of Patients Co-Infected with HIV and Tuberculosis in the Cape Coast Metropolis

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Background: The Human Immunodeficiency Virus (HIV) is a virus that attacks cells that aid the human body fight infection, thus making a person more susceptible to other infections and diseases. One of the significant infections that an HIV infected person is prone to is Tuberculosis (TB). In Ghana persons living with HIV face massive stigma, low self-esteem, declined financial state, and other effects in various aspects of their lives. The dual diseases put lots of strain on this category of people.

Purpose: The study explored the lived experiences of persons co-infected with HIV and TB and how they were able to navigate the treatment process and the 'cursed duet'.

Methods: The study used convenient sampling to select 24 HIV and TB co-infected participants who were in their continuation phase of TB treatment at the Cape Coast Teaching Hospital. Face to face interviews were conducted at a convenient location within the CCTH and content analysis used to analyze themes that emerged.

Results: The study found that stigma was very high, they experienced low self-esteem leading to poor mental state. They go through financial challenges as the double burden of the diseases leaves them no room to work. The 'cursed duet' affects the personality, socioeconomic and sociocultural status hence they cannot associate themselves with people.

Conclusion: In conclusion, HIV and TB co-infection have a direct effect on the mental, socio-economic, and sociocultural status on people, hence health education should be intensified to help ameliorate the situation.

Translation, Cultural Adaptation and Psychometric Properties of the Ghanaian Language (Akan; Asante Twi) Version of the Health Literacy Questionnaire

Millicent Addai Boateng; Peter Agyei-Baffour; Sanne Angel; Ulrika Enemark

Background: Patients' competencies and resources to manage their own health, which is termed health literacy, is a necessity for better health outcomes. Thus, it is relevant to have a comprehensive health literacy measurement tool suitable for populations of interest. The Health Literacy Questionnaire (HLQ) is a tool useful for health literacy assessment covering nine dimensions/scales of health literacy. The HLQ has been translated and validated in diverse contexts but has so far not been assessed in any country in sub-Saharan Africa.

Purpose: We sought to translate this tool into the most common language used in Ghana and assess its validity.

Methods: We carried out a cross-sectional study using the HLQ concurrently with an assessment of a malaria programme for caregivers with children under 5 years. The HLQ was translated using a systematic translation procedure. We analysed the psychometric properties of the HLQ based on data collected through face-to-face interviews of 1234 caregivers. The analysis covered tests on the difficulty level of scales, composite reliability, Cronbach's alpha and confirmatory factor analysis (CFA).

Results: Cognitive testing showed that some words were ambiguous, which led to minor rewording of the questionnaire. A nine-factor CFA model was fitted to the 44 question items with no cross-loadings or correlated residuals allowed. Given the very restricted nature of the model, the fit was quite satisfactory: χ^2 DWLS (866 df) = 17,177.58, $p < 0.000$, CFI = 0.971, TLI = 0.969, RMSEA = 0.126 and SRMR = 0.107. Composite reliability and Cronbach's alpha were > 0.65 for all scales except Cronbach's alpha for scale 9, 'Understanding health information well enough to know what to do' (0.57). The mean differences between most demographic groups among health literacy scales were statistically significant.

Conclusion: The Akan-Twi version of HLQ proved relevant in our description of the health literacy levels among the caregivers in our study. This validated tool will be useful to conduct health literacy needs assessments to guide policies addressing such needs. Further work is needed to validate this tool for use in Ghana and similar contexts.

Keywords: Health Literacy Questionnaire, Translation, Psychometric properties, Caregivers, Ghana, West Africa

Bidirectional Relationship between Cognition and Motor Function in Older Ghanaians: Results from the WHO-Study on Global Ageing and Adult Health (SAGE) Wave 2

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Background: The world's rapidly aging population continues to impact countries' health policies and programs. In addition to this, there is an increased age-related complication such as a decline in cognitive, motor, emotional, and sensory functions and an increase in injuries. Motor and cognitive function among the aged is an important factor for quality of life and carrying out activities of daily living (ADL). Studies have shown the influence of cognition on motor functions, but the influence of motor function on cognition is still not clearly established.

Purpose: The study examines the bidirectional relationship between cognition and motor functions.

Methods: Data for this study were drawn from the WHO Study on AGEing and Adult Health (SAGE) Wave 2, conducted between 2014 and 2015 in Ghana. A multistage cluster sampling technique was employed with 250 primary sampling units (PSU) and 20 strata. Cognition and motor functions (handgrip strength) were the outcome variables for the study. Descriptive analysis by means of frequencies and percentages was used to summarize categorical variables, while means and standard deviations were used to summarize continuous variables. Simple and multiple linear regression models were used to determine the bidirectional relationship between cognition and motor functions. The analysis was done using STATA version 16.0 statistical software.

Results: Handgrip strength was positively associated with a person's cognition. After controlling for possible confounders such as the individual's health conditions (diabetes, hypertension, stroke, alcohol use), there was a significant increase in cognition with increasing handgrip strength. A unit increase in handgrip strength increased the individual's cognition by 12% ($B=0.12$, 95%CI: 0.04, 0.20). On the other hand, cognition influenced an individual's handgrip strength. Thus, a unit increase in cognitive function increased handgrip strength by 15% ($B=0.15$, 95%CI: 0.05, 0.24). Other variables such as age, sex and education level also influenced the cognition and handgrip strength of the individual.

Conclusion: A bidirectional relationship exists between an individual's cognitive and motor functions. Age, sex and level of education are also associated with cognitive and motor functions.

Care Seeking Behaviour and Knowledge of Mothers Regarding Pneumonia in Under-Five Children at Bashayir Hospital, April 2020/October 2021

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Background: Sixteen percent of all deaths of children under five years is due to pneumonia and it's a major killer, but it can be prevented with simple interventions, and treated with low-cost. Studies have shown that failure to recognize signs and symptoms of childhood illness prevents or delays care seeking

Purpose: This study aimed to assess the care seeking behavior and knowledge of mothers about pneumonia in children less than five-year in Bashayer hospital.

Methods: The study design was a Descriptive cross sectional hospital based study. One hundred forty five mothers who have children less than five years were involved in the study from bashayer hospital; inpatient and outpatient pediatric unit. Data were collected by direct interview with the mothers using a well structured questionnaire, which is uploaded in Google form. The data was analyzed using Spss version 25.

Results: One hundred thirty six (93.8%) bring their children earlier to hospitals, while 9(6.2%) do not. Mothers have excellent knowledge about the signs, symptom and risk factors 101(69.7%), but they have mixed view about the cause of pneumonia, only 41(28.3%) of mothers know the cause of pneumonia. How fast the mothers bring their children to the health centers is affected by educational level ($p=0.019$) and significantly affected by the knowledge of mothers about pneumonia definition ($p=0.029$), and perception that is a major killer of children ($p=0.029$), but not appears to be affected social class, age of mothers and

Conclusion: The overall care seeking behavior and knowledge of mothers is excellent, but still there are a sizable number of mothers who have mixed views and do not perceive pneumonia as a major killer.

Predictors of Adherence and Survival among HIV/AIDS Adult Patients in Volta Region of Ghana

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Background: HIV/AIDS remains a major global health problem of which about 32.7 million affected individuals died since the inception of the virus and in Ghana, approximately 14,181 annual deaths were recorded for AIDS with about 334,713 individuals living with HIV/AIDS in the year 2018 giving a prevalence rate of 1.69%.

Purpose: The aim of the study was to explore the predictor variables of adherence and survival in HIV/AIDS adult patients by fitting a Cox Proportional Hazard model using the data obtained from the Volta Region.

Methods: This is a secondary analysis of data obtained on 1856 HIV/AIDS adults patients on ARV gathered from four government hospitals in the Volta Region of Ghana. Data were analyzed using Stata 16.0. Categorical variables were analyzed using frequencies and percentages and continuous variables using mean and standard deviation. Bivariate and Multivariate CoxProportional Hazards models were used to compute the crude and adjusted hazard ratios for the predictors of survival of adult HIV/AIDS patients after ART.

Results: The study found that the mean age was 40.25 within a standard deviation 13.43 years. The mean weight of the patients was 57.14 ± 13.68 Kg. About 3.7% were co-infected with TB, 3.6% smoked, 17.0% took alcohol. A Cox-Proportional hazard model revealed that age, marital status, weight, disclosure of one's status, sexually active HIV/AIDS patients, the stage of HIV/AIDS, those on TLD regimen were significantly associated with the survival of HIV/AIDS patients. A one year increased in age increases the risk of death by 3% [AHR=1.03, 95%CI=1.00, 1.06]. Sexually active patients were 79% less likely to die compared to sexually inactive [AHR=0.21, 95%CI= 0.07, 0.57]. Patients who were in their third and fourth stage were 5.28 and 15.39 times more likely to die compared to those in their first stage [AHR=5.28, 95% CI= 1.19, 23.35; AHR=15.39, 95%CI=2.57, 92.17]. HIV/AIDS Patients who were on TLD regimen had 99% less likelihood of death as compared to those who were on CBV+NVP [AHR=0.01, 95%CI=0.01, 0.08].

Conclusion: The survival time of the HIV patients' taking into account the date of ART initiation to either loss to follow-up, or transfer to another facility or death, is only 2% that experienced the outcome of interest, contributing 49.61 person-years. There was a high probability of survival after about 7 years of ART initiation and there was a significant difference in the survival of HIV/AIDS patients with age. The probability of survival was lower in males than females after years of ART initiation. WHO clinical stage was also a significant predictor of mortality where HIV/AIDS patients who were in their third and fourth stage had higher hazard compared to those in their first stage. Also, 1Kg increase in weight decreases the risk of death by 2%.

Keywords: CBV (Azidothymidine + Lamivudine), NVP (Nevirapine), HIV (Human immunodeficiency virus), AIDS (Acquired immune deficiency syndrome), ART (Antiretroviral therapy), TLD (Tenofovir + Lamivudine + Dolutegravir)

The Use of Pineapple Leaf Fiber for Prosthetic Socket Application

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Background: This work reports on the use of low-cost pineapple leaf fiber (PALF) as an alternative reinforcing material to the established, commonly used carbon fiber material for prosthetic socket fabrication. The high cost of carbon fiber motivates this research looking at an alternative reinforcing filler for composite development in resource-limited settings.

Purpose: The objective of the work was to study the influence of PALF orientation and volume fraction on methyl methacrylate-based polymer matrix for prosthetic socket application.

Methods: PALF/methyl methacrylate-based (MMA) composites with 0°, 45° and 90° fiber orientations were made with 5–50 v/v fiber volume fractions. The PALF/MMA composites were subjected to a three-point flexural test to determine the effect of fiber volume fraction and orientation on the flexural properties of the composite.

Results: The results showed that 40% v/v PALF/MMA composite with 0° fiber orientation recorded the highest flexural strength (50 MPa) and stiffness (1700 MPa).

Conclusion: Considering the average load range exerted on prosthetic sockets, the flexural performance of the novel composite characterized in this work suggests that it is ideally suitable for socket- limb load transfer, especially in resource-constrained parts of the world.

Response to Covid-19 Pandemic in Slum Communities in Oyo State, Nigeria

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Background: The impact of the COVID-19 pandemic on populations was differently felt, depending on location, access to socio-economic resources, and availability of policies to address emergent situations. The study analyzed how slum communities responded to the COVID-19 pandemic in Oyo State, Nigeria, given the myriad of social deprivations that characterize slum communities in Nigeria. The study argued that even though the COVID-19 is a global pandemic, population groups are differently affected. Similarly, the resources that are available at the community level determine how they respond to the disease outbreak and the impact on their lives and livelihoods. The study argues that the response measures adopted by the households are a determinant of the impact of the disease on their livelihoods.

Purpose: Hence, the main objective of the study was to determine the response of slum communities to the COVID-19 pandemic in Oyo State.

Methods: The study used primary data collected from four local government areas in Oyo State, through quantitative and qualitative methods. The United Nations pillars for the COVID-19 response framework were adapted for the study. Health first, social protection, economic recovery, and community resilience were used to measure the households' responses to the disease outbreak.

Results: The study found that while the health response of the respondents was high (67.9%), their endogenous (31.6%) and exogenous (27.6%) social protection responses were low.

Conclusion: The study concluded that social protection measures are key in safeguarding the health of vulnerable populations like slum dwellers in the face of pandemics like the COVID-19.

Keywords: Slum communities, Responses to COVID-19, social protection, livelihoods, community resilience

Alteration in Taste and Hair in Breast Cancer Patients Treated with Chemotherapy: Exploration of Coping Strategies

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Purpose: This study examined the experiences and coping strategies for taste and hair alteration among breast cancer women treated with chemotherapy.

Methods: A purposive sample of 18 women who completed chemotherapy three months before this study began were recruited and a descriptive design was adopted for collecting data. A semi-structured interview guide was used for data collection. Data collection and analysis took place at the same time. Data was analyzed using content analysis. Participant's consent was sought and all interviews were audio-recorded and transcribed verbatim. Confidentiality and anonymity of the participants were adhered to. Ethical approval was obtained for the study from the Noguchi Memorial Institute of Medical Research (NMIMR-IRB CPN017/17-18).

Results: Two themes emerged from the study and they were: Chemotherapy Burdens (taste and hair alteration) and coping strategies (Self-esteem and adaptation).

Conclusion: Taste and hair alteration affects breast cancer patients' lives, and the patients develop management plans or strategies to deal with the effect. Even though some self-management Plans or strategies can be seen as positively adaptive, the likelihood for increased caloric consumption and poor eating behaviors related with some coping strategies may be a source for concern given the observation of weight gain during breast cancer treatment and association of obesity with poor treatment outcomes in breast cancer patients. Further studies to determine the overall chemotherapy burden and measurement of cancer and non-cancer-related consequences of these behavior adaptation is a necessity.

Keywords: Breast cancer, Palliative care, chemotherapy, hair and taste alteration

Comprehensive Knowledge about HIV and General Health Literacy in Angola

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Background: HIV/AIDS infection makes a person vulnerable, has a major impact on their general health status, and is associated with individuals with low levels of literacy in sub-Saharan Africa, which in turn determines low adherence to available antiretroviral treatment.

Purpose: This study aims to identify the comprehensive knowledge of HIV/AIDS in Angolan adults responding to the 2015/2016 demographic and health survey and compare it to a health literacy indicator.

Methods: Data from 19,785 individuals aged 15-49 years participating in the 2016 demographic health survey in Angola were analyzed. The assessment of comprehensive knowledge of HIV in Angolan adults was based on five HIV/AIDS-specific questions present in that survey. The health literacy indicator was obtained through Factor Analysis, with ten variables related to the dimensions of health literacy.

Results: Comprehensive knowledge about HIV/AIDS in Angola was 47.7%. Some factors such as being male, having completed primary schooling and more, living in urban areas, watching television, reading newspapers, being single, speaking Portuguese at home were associated with higher odds of comprehensive HIV/AIDS knowledge. On the other hand, age and listening to the radio were not associated with comprehensive HIV/AIDS knowledge. The literacy indicator showed that only 31% of the respondents have high health literacy, compared with comprehensive knowledge of HIV/AIDS there was a statistically significant association at a 5% level of significance.

Conclusion: This study, in addition to measuring health literacy in Angola in a large population, used data collected in the 18 provinces and related it to the population's general knowledge about HIV/AIDS which is worryingly low.

Utilization of Online Education among Nursing Students During Covid-19 Pandemic: A Study in the Northern Region of Ghana

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Background: E-learning technologies are playing an important role during this pandemic. However, in less resourced locations, such as the northern part of Ghana, there are technical, education/literacy, and socio-economic hurdles to overcome. There is a possibility that these difficulties will impede the online educational process during the pandemic.

Purpose: The purpose of this research was to establish the level of preparation, utilization, perception, successes, and challenges experienced by students in nursing college in the Northern area who benefited from the online education provided by the various training institutions.

Methods: A descriptive cross-sectional survey was carried out to source data from students who were enrolled in the online courses during the lockdown period of COVID-19 Pandemic. The ODK collect tool was used to collect closed-ended data.

Results: The study enrolled 403 participants. Nursing students are aware of e-learning/online education (52.6 percent). Nonetheless, trainees' attitudes, knowledge and perceptions of online education were poor. High internet costs, poor internet connection, low technical abilities in using e-learning platforms, and difficulties obtaining electricity are major hurdles to participating in the online education among students. Students' levels of satisfaction with online education were influenced by their prior interest and readiness for the program, employment status, and distraction from home responsibilities (at $p < 0.000$ for all factors).

Conclusion: Nursing schools must address students' negative attitudes regarding e-learning and take steps to enhance students' experiences in the virtual learning environment.

Keywords: e-learning, online education, students, COVID-19 Pandemic, Ghana

Determinants of Covid-19 Vaccine Uptake among FSW in Nairobi County, Kenya

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Background: Female sex work has been criminalized in most African countries including Kenya, as a result the sex workers operate in hiding, this hinders them from accessing health care services optimally including HIV prevention, care and treatment yet they carry the countries HIV prevalence burden at 29% compared to general population at 4.9%. University of Manitoba under Partners for Health and Development in Africa (PHDA) is a HIV/STI research center serving approximately 35,000 Female Sex Workers for over four decades. In March of 2020 COVID-19 first positive case was announced in Kenya, this led to restriction of night movement and hot spots closure by the president, adversely affecting sex work times and venues of operation.

Purpose: The study aimed to examine the determinants of Covid-19 vaccine uptake among female sex workers in Nairobi County, Kenya.

Methods: This was an experimental design that utilized mixed methods of data collection. Two sites serving MSM within Nairobi were purposively selected. Eligible MSM who had just enrolled into PrEP within one week were selected through simple random sampling and randomized to either control or intervention arm using computer generated randomization table. The intervention arm received Targeted counselling sessions three times in six months these included; health education on PrEP, depression assessment, alcohol consumption assessment and counselling, substance abuse assessment and counselling and MHealth reminders to honor PrEP clinic appointments. Control arm received PrEP refills and health education with no other intervention as prescribed by the government. Focused group discussion was used to explore drivers to PrEP retention for both arms at baseline and end line. MSM peer leaders and site staff were approached for Key informant Interviews, qualitative data was recorded and thematic analysis done. Quantitative data was collected through semi structured questionnaires. Univariate, bivariate and multivariate data analysis was done. Chi square, McNerma test and regression analysis were used. T test was used to test for differences between the groups. Both groups were followed at month 1, month 3 and month 6 with data being collected at all points and retention analyzed.

Results: A total of 168 MSM were enrolled into the study, 84 on each arm. Retention of MSM on PrEP at month one of the study was 97.6% and 81% in intervention and control arm respectively. At month three retention of MSM to PrEP was 91.7% and 31% in intervention and control arm respectively. At month six the retention went down to 69% and 19% in intervention and control arm respectively. PrEP knowledge among MSM in intervention arm was 37.7% and 83% at baseline and end line respectively. While PrEP knowledge level among the control arm was 44% and 37.5% at baseline and end line respectively.

Conclusion: Targeted counselling is very key in ensuring retention to PrEP program. Poor retention indicates poor adherence to treatment, while good retention might not automatically translate to good PrEP adherence but it increases the chances of one adhering to PrEP, hence increasing the chances of protecting self from contracting HIV.

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