

COLLINS OTIENO ASWETO
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EDUCATION

<u>Degree</u>	<u>Institution</u>	<u>Department</u>	<u>Details</u>
PhD, Medicine July 2017	Capital Medical University, Beijing, China	Preventive Medicine, Environmental Health & Hygiene	Dissertation: “Cardiovascular Toxicity of Silica anoparticles and Benzo [a] Pyrene Combined Exposure And Related Mechanisms”
MPH, Epidemiology & Population Health. Dec, 2012	Maseno University, Kenya	Public Health and Community Development	Thesis: “Factors Influencing the Level of Maternal Health Care Utilization among Mothers of Children Under three Years in Madiany Division of Rarieda District, Kenya”
BSc. Biomedical Science and Technology Dec, 2006	Maseno University, Kenya	Public Health and Community Development	Concentration: Pharamcology and Physiology

PROFESSIONAL EXPERIENCE

January 2018 – Current	Lecturer at University of Embu, School of Nursing, Department of Community Health Lecturing: Epidemiology, Biostatistics, and Environmental health, Demography, and Research methods. Developed eLearning modules for these units.
July 2019 – June 2023	Examination Coordinator School of Nursing, University of Embu. Successfully coordinated School of Nursing examination process in a timely manner. Reviewed examination rubrics used for presentation of results to University Senate.
Sep 2017 – Dec 2017	Part time lecturer at Maseno University, School of Public health and Community development, Department of Public health. Lecturing: Epidemiology, Environmental Toxicology, Biostatistics, Demography, and Research methods, through face to face and eLearning platform.

- May 2014- August 2014 Lecturer at Great Lakes University of Kisumu, Faculty of Health Science.
Lecturing: Epidemiology, Biostatistics, Research methods, Demography, and Health System Management
- January 2013 to April 2014 Assistant Lecturer at Great Lakes University of Kisumu, Faculty of Health Science.
Lecturing: Biostatistics, Epidemiology, Research methods, Demography, and Health System Management

RESEARCH AND CONSULTANCY EXPERIENCE

- 2023 to Current: CoPI in project that develops digital Intervention for the Prevention and Early Detection of Depression and Suicide among the Youth in Kenya.
- 2021 to current: Investigator in project that Optimizes Parental Empowerment and Engagement in Early Childhood Development Education to advance early childhood education in Embu County, Kenya
- 2021 to current: CoPI in project that determine Suboptimal Health Status and Chronic diseases among the Adult population in Hail region, Saudi Arabia.
- 19th to 26th August, 2022: Provided technical support to LUMOS foundation in undertaking baseline survey status of Charitable Children's Institutions (CCIs) to support holistic and systematic implementation of care reforms in Embu, Kenya.
- 2015 – 2017: Assessed mechanisms of combined toxicity of Silica nanoparticles and Benzo [a] Pyrene on Cardiovascular system
- January 2012 to March 2014: Coordinated and Supervised baseline survey, mid and end term evaluation for Consortium of National Health Research Project on key WASH indicators within households of Kisumu East district under Great Lakes University of Kisumu.
- 2011 – 2014 Research Assistant in an efficacy trial of a gravity-fed household water treatment device as a delivery system for zinc in zinc-deficient children and women. A collaboration study between Wageningen University, The Netherlands, and the ETH, Zurich, Switzerland.
- March - April 2011 Coordinated Baseline survey for KEMRI/CDC in Highland Malaria research project conducted in Rachuonyo District, Kenya.
- January, 2011 Coordinated Baseline survey organized by ChildFund Kenya, Lake Region Programme Area (LPA) in Rongo, Rachuonyo, and Kenyena Districts, Kenya.
- June - August 2010 Research Assistant in the Baseline survey for Dialogue model project on prevention of HIV spread among Secondary school students by Kenya Aids Control Council. A study conducted by Maseno University.

GRANT AND AWARD

2023: National Research Fund Kenya and The African Centre for Technology Studies (ACTS)
Collaborative Research Grant

Project title: A digital Intervention for the Prevention and Early Detection of Depression and Suicide among the Youth in Kenya.

Amount: 4,819,000 Kshs.

2021: Spencer Foundation Small grant

Project title: Optimizing Parental Empowerment and Engagement in Early Childhood Development Education in Embu County, Kenya

Amount: 46,751 USD.

2021: University of Hail, Research grant

Project title: Determination of Suboptimal Health Status and Chronic diseases among the Adult population in Hail region, Saudi Arabia.

Amount: 30,000 USD.

2014 – 21017: Chinese Government Ph.D. Scholarship award

STUDENT SUPERVISION

S/No.	Name	Title	Program and University
1.	Naomi Roosevelt Aluoch Ochanda	Role of sanitation-hygiene practices and social norms on sustainability of open defecation free status in households of Suna-West Sub- County, Migori County	MPH, Maseno University Graduated in Dec, 2022
2.	Violet Akinyi Otieno	Assessment of clinical waste management associated with Healthcare –Associated- Infections Among Health Care Workers in Kisumu Central Sub County Hospitals	MPH, Maseno University. Graduated in Dec, 2022
3.	Kennedy Odhiambo Okello	Knowledge, attitude, practices and risk perception towards HIV and AIDS prevention among secondary school students in Gwassu South Ward, Homa Bay County, Kenya	MPH, Maseno University Graduated in Dec, 2022
4.	Charles Oduor Opondo	Prostate cancer screening behaviour and perceived self-vulnerability among male health workers at public health facilities in Kisumu county, Kenya	MPH, Maseno University. Graduated in December, 2019
5.	Isabella Nyang'au	Factors influencing utilization of individual birth plan among women attending postnatal clinic at Jaramogi Oginga Odinga Teaching and Referral Hospital, Western Kenya	MPH, Maseno University. Graduated in April, 2021

PUBLICATIONS

BOOK CHAPTER

1. **Asweto C. O.** & Onyango P. O. (2023). Antimicrobial resistance in a changing climatic context: An emerging public health threat in Africa, Chapter 10. In Yemi Adewoyin (Ed.), *Health and Medical Geography in Africa: Methods, Applications, and Development Linkages*. Springer Nature. ISBN: 978-3-031-41267-7.

ARTICLE

1. Alzain MA, **Asweto CO**, Saeed, M. E., Kassar, A., Alsaif, B. (2023). Psychometric Properties of Suboptimal Health Status Instruments: A Systematic Review. *J. Pers. Med.*, 13(2), 299
2. Alzain MA, **Asweto CO**, Atique S, Elhassan NEE, Kassar A, Hassan S-u-N, Humaida MI, Yusuf RA, Adeboye AA. (2022). Effectiveness of Human Mobility Change in Reducing the Spread of COVID-19: Ecological Study of Kingdom of Saudi Arabia. *Sustainability*, 14, 3368.
3. Opondo CO, Onyango PO, **Asweto CO**. (2022). Effect of Perceived Self-Vulnerability on Prostate Cancer Screening Uptake and Associated Factors: A Cross-Sectional Study of Public Health Facilities in Western Kenya. *Annals of Global Health*, 88(1):1-12
4. Alzain MA, Elsser NE, **Asweto CO**, Alsease MM, Humaida MI, Kassar A, Abdelaziz MO. (2021). Knowledge, attitude, and practice towards COVID-19 prevention: a survey of Sudanese people. *Int J Community Med Public Health*, 8(10):4734-4741
5. Alzain M, Haruwn MH, Abdelaziz MO, Elsheikh M, Algahtani FD, **Asweto CO**, Adeboye AA, Elsser NEE, Itumalla R. (2021). Association between Cholera Outbreak and Traditional Mining in Northern State, Sudan 2017: A Case Series Study. *Journal of Global Infectious Diseases*. Accepted
6. Nyang'au I, **Asweto CO**, Ouma P, Ouma J. (2021). Utilization of Individual Birth Plan among Women Attending Postnatal Clinic at Jaramogi Oginga Odinga Teaching and Referral Hospital, Kisumu Kenya: A Hospital-Based Survey. *The Columbia University Journal of Global Health*, 10(2).
7. Abdelaziz MO, Alzain MA, Elshiekh M, **Asweto CO**, Elsser NE, Adeboye AA, Yusuf RA, Algahtani F. (2021). Prevalence, awareness, and social determinants of hypertension: A cross-sectional study in Northern State, Sudan. *Jordan Journal of Applied Sciences - Natural Series*, 14(1): 1-13.
8. Owiti BA, **Asweto CO**, Oyieke JA, Aluoch JR, Obonyo CO. (2021). Dehydration Knowledge and Dairrheal Perception are Predictors of Dairrheal Home Management: A Cross-Sectional Study of Caregivers in West Seme, Kisumu County, Kenya. *American Journal of Public Health Research*, 9(2):57-62.
9. **Asweto CO**, Onyango PO, Alzain MA, Wang W. (2020). Effect of increased residential mobility and reduced public spaces mobility in containing COVID-19 in Africa. *Journal of Global Health Report*, 4:e2020075.

10. Ouma EG^{#*}, Samba B, **Asweto CO**, Amimo F. (2019). Determinants of Mother-To-Child HIV Transmission Among HIV Exposed Infants In Siaya County, Kenya. *Researchjournali's Journal of Public Health*, 5(4):1-17
11. Samba BO^{#*}, Ayodo G, Amimo F, **Asweto CO**. (2018). Experience and Perceptions on Preterm Births among Women Attending ANC Clinic at Kisumu County Hospital, Kenya. *Researchjournali's Journal of Public Health*. 4(3), 1-17.
12. **Asweto CO** (2018). Cardiovascular health risk posed by polycyclic aromatic hydrocarbon and ultrafine particles. *Journal of Clinical and Experimental Toxicology*. 1(1):46-50.
13. **Asweto CO**, Hu H, Wu J, Shi Y, Feng L, Yang X, Liang S, Cao L, Duan J, Sun Z.* (2018). Gene profiles to characterize the combined toxicity induced by low level co-exposure of silica nanoparticles and benzo[a]pyrene using whole genome microarrays in zebrafish embryos. *Ecotoxicology and Environmental Safety*. 163:47-55.
14. **Asweto CO**[#], Wu J, Alzain MA, Hu H, Andrea S, Feng L, Yang X, Duan J, Sun Z* (2017). Cellular pathways involved in silica nanoparticles induced apoptosis: A systematic review of in vitro studies. *Environmental Toxicology and Pharmacology*. 56:191-197
15. **Asweto CO**[#], Wu J, Hu H, Feng L, Yang X, Duan J, Sun Z*. (2017). Combined effect of silica nanoparticles and benzo[a]pyrene on cell cycle arrest induction and apoptosis in human umbilical vein endothelial cells. *International Journal of Environmental Research and Public Health*, 14:289.
16. Ouma J^{#*}, **Asweto CO**[#] (2017). Maternal Vulnerabilities and Disparities in Availability of Antenatal Care Content in Kenya: Analysis of KDHS 2008/9. *American Journal of Public Health Research*, 5(4), 115-123.
17. Hu H[#], **Asweto CO**[#], Wu J, Shi Y, Feng L, Yang X, Liang S, Cao L, Duan J, Sun Z.* (2017). Gene expression profiles and bioinformatics analysis of human umbilical vein endothelial cells exposed to PM_{2.5}. *Chemosphere*, 183: 589-598.
18. Feng L[#], Yang X, **Asweto CO**, Wu J, Zhang Y, Hu H, Shi Y, Duan J*, Sun Z. (2017). Low-dose combined exposure of nanoparticles and heavy metal compared with PM_{2.5} in human myocardial AC16 cells. *Environmental Science and Pollution Research*. 2017:1-11
19. Wu J[#], Shi Y, **Asweto CO**, Lin F, Xiaozhe Y, Zhang Y, Hu H, Duan J, Sun Z* (2017). Fine particle matters induce DNA damage and G2/M cell cycle arrest in human bronchial epithelial BEAS-2B cells. *Environmental Science and Pollution Research*, 2017:1-11. DOI: 10.1007/s11356-017-0090-3.
20. Alzain MA[#], **Asweto CO**, Zhang J, Fang HH, Zhao Z, Guo X, Song M, Zhou Y, Chang N, Wang Y, Wang W*. (2017). Accelerated biological age in the China suboptimal health: a case control study of relative telomere length from a real-life community, China. *OMICS: A Journal of Integrative Biology*. 21(6):1-8.
21. Feng L[#], Yang X, **Asweto CO**, Wu J, Zhang Y, Hu H, Shi Y, Duan J, Sun Z*. (2017). Genome-wide transcriptional analysis of cardiovascular-related genes and pathways induced by PM_{2.5} in human myocardial cells. *Environmental Science and Pollution Research*, 1-11.
22. Hu H[#], Shi Y, Zhang Y, Wu J, **Asweto CO**, Feng L, Yang X, Duan J, Sun Z.* (2017). Comprehensive gene and microRNA expression profiling on cardiovascular system in zebrafish co exposed of SiNPs and MeHg. *Sci. Total Environ*. 607-608(17), 795-805.

23. Zhang Y[#], Hu H, Shi Y, Yang X, Cao L, Wu J, **Asweto CO**, Feng L, Duan J, Sun Z*. (2017). ¹H NMR-based metabolomics study on repeat dose toxicity of fine particulate matter in rats after intratracheal instillation. *Science of the Total Environment*, 589, 212–221.
24. Wu J[#], Shi Y, **Asweto CO**, Lin F, Xiaozhe Y, Zhang Y, Duan J, Sun Z*. (2016). Co-exposure to amorphous silica nanoparticles and benzo[a]pyrene at low level in human bronchial epithelial BEAS-2B cells. *Environmental Science and Pollution Research*, 23(22). DOI: 10.1007/s11356-016-7559-3
25. Hu H[#], Wu J[#], Li Q, **Asweto CO**, Lin F, Xiaozhe Y, Duan F, Duan J, Sun Z*. (2016). Fine particulate matter induces vascular endothelial activation 4 via IL-6 dependent JAK1/STAT3 signaling pathway. *Toxicol. Res.*, 3, 946-953.
26. Sebastian A[#], Alzain MA, **Asweto CO**, Song H, Cui, L, Yu X, Ge S, Dong H, Rao P, Wang H, Fang H, Gao Q, Zhang J, He D, Guo X, Song M, Wang Y, Wang W*. (2016). Glycan Biomarkers for Rheumatoid Arthritis and Its Remission Status in Han Chinese Patients. *OMICS A Journal of Integrative Biology*, 20(6), 343-351.
27. Sebastian A[#], Alzain MA, **Asweto CO**, Mahara G, Guo X, Song M, Wang Y, Wang W*. (2016). The Malaysian health care system: Ecology, plans, and reforms. *Family Medicine and Community Health*, 4(3). DOI 10.15212/FMCH.2016.0101
28. **Asweto CO**[#], Mohamed AA, Sebastian A., Alexander R, Wei W*. (2016). Integration of community health workers into health systems in developing countries: Opportunities and challenges. *Family Medicine and Community Health*, 4(1):37–45.
29. Ogolla MM[#], Opemo DO, **Asweto CO***. (2016). Early Mobilization and Physical Activity Improve Stroke Recovery: A Cohort Study of Stroke Inpatients in Kisumu County Referral Hospitals, Kenya. *American Journal of Public Health Research*, 4 (4), 154-158
30. Ouma J^{#*}, Olang' S, **Asweto CO**, Obago IT, Kaseje D. (2016). Does Breast Cancer Risk Awareness Motivate Personal Prevention Practices: Findings from a Community-based Assessment? *American Journal of Public Health Research*, 4(3), 93-97
31. Mahara G[#], **Asweto CO**, Cao K, Alzain MA, Sebastian A, Barr J, Guo X, Wei W*. (2015). Utilization of ANC and PNC Services in Nepal: A Multivariate Analysis Based on Nepal Demographic Health Survey 2001 and 2006. *American Journal of Health Research*, 3(6), 318-327.
32. **Asweto CO**^{**}, Ouma, JO, Aluoch JR, Obonyo CO. (2014). Women empowerment and skilled attendance/Facility Delivery in a Rural Community of Western Kenya, *IOSR Journal of Nursing and Health Science*, 3(2), 49-53.
33. **Asweto CO**^{**}, Ouma JO, Aluoch JR, Obonyo CO. (2014). Maternal Autonomy, Distance to Health Care Facility and ANC Attendance: Findings From Madiany Division of Siaya County, Kenya. *American Journal of Public Health Research*, 2(4), 153-158.

CONFERENCES AND WORKSHOPS ATTENDED

- 7 – 11 January, 2022 The Implementation Research (IR) Methodology and Applications workshop held at Kabira Country Club, Kampala, Uganda.
- 19-20 October, 2018 3rd International Convention on Geosciences and Remote Sensing & Geochemistry, Environmental Chemistry and Atmospheric Chemistry, Ottawa, Canada. Presented a paper titled: Combined Effect of Silica Nanoparticles and Benzo[a]pyrene on Cell Cycle Arrest Induction and Apoptosis in Human Umbilical Vein Endothelial Cells.
- 19-20 October, 2017 12th International Conference on Environmental Toxicology and Ecological Risk Assessment Atlanta, Georgia, USA. Presented a paper titled: Combined Effect of Silica Nanoparticles and Benzo[a]pyrene on Cell Cycle Arrest Induction and Apoptosis in Human Umbilical Vein Endothelial Cells.
- 25 November 2016 Annual Key laboratory conference for Clinical Epidemiology, organized by Epidemiology and Health Statistic Department. Beijing, PR China. Presented a paper titled: Early Mobilization and Physical Activity Improve Stroke Recovery: A Cohort Study of Stroke Inpatients in Kisumu County Referral Hospitals, Kenya.
- 18-21 October 2016 International Conference of Nanomedicine, China Nanomedicine 2016 held in Wuhan, PR China.
- 27-29 May 2016 The Fifth annual meeting for National Medical Examination Forum for Health Management- Beijing, Army Hospital, PR China.
- 13-11 December 2015 The 1st Conference of Life Omics and Precision Medicine. Beijing, PR China.
- 20 November 2015 Annual Key laboratory conference for Clinical Epidemiology, organized by Epidemiology and Health Statistic Department. Beijing, PR China. Presented a paper titled: Maternal Autonomy, Distance to Health Care Facility and ANC Attendance: Findings From Madiany Division of Siaya County, Kenya.
- 24 November 2014 Annual Key laboratory conference for Clinical Epidemiology, organized by Epidemiology and Health Statistic Department. Beijing, PR China. Presented a paper titled: Women empowerment and skilled attendance/Facility Delivery in a Rural Community of Western Kenya.
- 12-14 October 2014 2014 Workshop on Mitochondrial Toxicity and Pathway-Based Chemical Safety Assessment An Inaugural Symposium of the Society of Toxicological Alternatives and Translational Toxicology, organized by China Society of Toxicology at Beijing, PR China.
- 15 August 2014 Scholarly workshop on “Improving basic urban services in informal settlements – Linking waste research in global south

- 15-17 April 2014 cities.” Presented a paper titled “Solid waste management in informal settlement – A case study of Nyalenda, Kisumu county, Kenya.”
University of East African Baraton Annual Conference, presented paper on “Maternal Autonomy, Distance to Health Care Facility and ANC Attendance: Findings from Madiany Division of Siaya County, Kenya”
- 20TH – 21ST January 2014 Attended 5th UCSF East African Collaborative Scientific Symposium in Kisumu, Kenya organized by UCSF Global Health Sciences and CFAR.

Referees

- 1. Prof. Wei Wang,**
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- 2. Prof. Charles O. Obonyo,**
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- 3. Rev. Canon Dr. Zephania Kore,**
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