



ASOG 2026 SCIENTIFIC CONFERENCE

**Investing in Anatomical Sciences Education
and Research in Ghana – Achievements,
Challenges, and Prospects.**

11th – 13th September 2026

University of Cape Coast, Cape Coast, Ghana.

BOOK OF ABSTRACTS





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DAY 0 | Thursday, 10 September 2026

Symposium at Medical Village, School of Medical Sciences, UCC

TIME	PROGRAMME
14:00–14:50	Lecture Relevance of Anatomical Knowledge in Health Sciences Education
15:00–15:45	Practical Viewing of specimens and hands-on practical
15:45–16:00	Closing Closing Remarks

DAY 1 | Friday, 11 September 2026

TIME	PROGRAMME
08:30–09:30	Registration & Breakfast
09:30–10:15	Opening Ceremony
10:15–11:00	KEYNOTE LECTURE Rev. Prof. H. Amonoo -Kuofi: Reimagining Human Anatomy Education in the 21st Century: Tradition, Transformation, and the Rise of Artificial Intelligence
11:00–11:15	Snack Break
11:15–12:00	PLENARY SESSION I: TECHNOLOGY USAGE IN ANATOMICAL SCIENCES Dr. Nii Koney-Kwaku Koney: Digital Foundations, Intelligent Futures - Integrating Digital Anatomy Tools and Artificial Intelligence in Anatomy Education
12:00–13:00	Lunch Break
13:00–13:30	PLENARY SESSION II: INNOVATIONS IN ANATOMY PEDAGOGY AND RESEARCH TRANSLATION Speaker and Topic from KNUST
13:30–14:30	SCIENTIFIC PRESENTATIONS (10 minutes each) ABS 01: Beyond the Scalpel: Ethical Considerations in AI-Driven Anatomy Education (<i>Adjei, Marian Ewura-Esi Adjeiwa</i>) ABS 02: Perceptions of Assessment Modalities in Anatomy: A Cross-Sectional Multicenter Study Among Medical Students in Côte d'Ivoire (<i>Maman You Esperance Broalet</i>) ABS 03: Practical Aspects of Anatomy Pedagogy Are Perceived to Be Beneficial by Young Medical Doctors in Ghana (<i>Zuweira Baba</i>)

	Mohammed) ABS 04: Histological staining potential of aqueous Lawsonia inermis (henna) leaf extract on rat brain tissues: An alternative to eosin (Saviour Kweku Adjenti)
14:30–15:00	Health Break
15:00–15:45	PLENARY SESSION III: ANATOMICAL RESEARCH AND GLOBAL COLLABORATION Dr. Saviour Dela Adjenti: Strengthening Ghana’s Health Sciences Education through Anatomical Research and Global Collaboration
15:45–17:00	ROUNDTABLE DISCUSSION: THE FUTURE OF ANATOMICAL SCIENCES IN GHANA Panel: Senior Faculty & Young Scientists Moderator: Dr. Raymond Saa-Eru Maalman
17:00	Day 1 Closing & Supper

DAY 2 | Saturday, 12 September 2026

TIME	PROGRAMME
08:00–09:00	Registration & Breakfast
09:00–09:45	PLENARY IV: BODY DONATION Rev. Prof. Benjamin Arko-Boham: Ethical, legal, and cultural issues related to cadaver acquisition and use
09:45–10:30	SCIENTIFIC PRESENTATIONS (10 minutes each) ABS 05: Initiating a body donation program in West Africa: Public knowledge, attitudes and willingness in Côte d'Ivoire (Yvan Zunon-Kipre) ABS 06: Ghana Survey: Public Knowledge and Attitudes on Whole-Body Donation (Benjamin Arko-Boham) ABS 07: Prevalence and Socio-Demographic Variables of Substance Use Disorders and Depression at the Ankaful Psychiatric Hospital (Esi Bon Berko) ABS 08: Anatomical distribution of injuries among road traffic accident victims: A retrospective cross-sectional study at Catholic Hospital, Battor in the Volta Region of Ghana (Saviour Kweku Adjenti)
10:30–11:00	Snack Break
11:00–12:00	SCIENTIFIC PRESENTATIONS (10 minutes each) ABS 09: Prevalence and Socio-Demographic Predictors of Mental Health Disorders Reported at the Ankaful Psychiatric Hospital (Esi Bon Berko)

11:00–12:00	ABS 10: Prevalence of Work-Related Musculoskeletal Disorders among Intra-City Commercial Minibus Drivers and Conductors in Kumasi Metropolitan Area of Ghana (Samuel Bimpong) ABS 11: Stereological Quantification of Collagen at the Materno-Fetal Zone in Preeclamptic and Normal Placentae (Moses Salifu) ABS 12: Immunohistochemical Landscape of PTEN Expression in Prostate Cancer Tissue from Korle Bu Teaching Hospital (Sylvester Logo)
12:00–13:00	Lunch Break
13:00–13:45	PLENARY V: CLINICAL ANATOMY Prof. Leonard Derkyi-Kwarteng: When Structure Fails: The Anatomical Basis of Pathology
13:45–15:00	SCIENTIFIC PRESENTATIONS (10 minutes each) ABS 13: McBurney's Point: Anatomical Variations of the Cecum and Appendix and Their Clinical Significance (Thomas Kabanga) ABS 14: Patterns of Infectious Disease Identified in Clinical Autopsy. The Role of Autopsy as an Ancillary Study in Determining the Cause of Death (Moshawa Khaba) ABS 15: Structural Congenital Malformations Reported at Patients of the Paediatrics Unit in Cape Coast Teaching Hospital (Abigail Aba Botchway) ABS 16: Promoting diabetic wound healing: the cocoa-IGF-1 connection (Valerie A.A Dordoye) ABS 17: Effects of aerobic exercise versus diet reversal on metabolic profiles and histomorphology of the liver and adipose tissue in obese rats (Alex Abudzie)
15:00–15:30	Health Break
15:30–16:15	PLENARY SESSION VI: FORENSIC ANATOMY Dr. Benjamin Aboagye: Reading the Bones of Truth: The Anatomist's Critical Role in Forensic Anthropology
16:15–17:00	SCIENTIFIC PRESENTATIONS ABS 18: Approaches For Identifying Anatomical Structures of the Face and Neck Using Cadaveric Specimens (Richard Konan Chatigre) ABS 19: Perceptions of mothers and caregivers of children with birth defects seeking treatment at the Trauma and Specialist and Winneba Municipal Hospitals in the Central Region of Ghana (Saviour Kweku Adjenti) ABS 20: Dermatoglyphic patterns in children with CP and their mothers (Gloria Aidoo)

	ABS 21: Sciatic nerve division patterns in an Ivorian cadaver series: a dual classification approach integrating Beaton-Anson criteria and regional anatomical level (Grace Ella Armande Djonde)
17:00–18:00	Closing & Supper
18:00–19:00	ASOG Steering Committee meeting

DAY 3 | Sunday, 13 September 2026

TIME	PROGRAMME
08:00–09:00	Registration & Breakfast
09:00–09:45	PLENARY VII: APPLIED ANATOMY IN HEALTH Prof Emmanuel Mesi Edzie: The Living Anatomy: How Diagnostic Imaging Informs Patient Management
09:45–10:15	SCIENTIFIC PRESENTATIONS ABS 22: Assessment of the Normal Ocular Biometry in Adult Patients: Magnetic Resonance Imaging Study (Gloria E. Abadom) ABS 23: Morphometric study of the optic radiations using diffusion tensor MRI tractography in black African adults: anatomical landmarks and clinical implications (Raissa Diaby) ABS 24: Morphometric Analysis of the Foramen Magnum in a Ghanaian Population: A Radiological Study Using Computed Tomography (CT) Imaging (Eric Aidoo)
10:15–10:30	Snack Break
10:30–10:45	GENERAL CONVERSATION Prof. F.K. Addai: Personal Financial Planning and Preparing for Retirement
10:45–12:45	ASoG General Meeting and Elections
12:45–13:00	Closing Ceremony
13:00	Lunch and Excursion

ASOG 2026

Thank you for participating in this year's Scientific Conference.

Investing in Anatomical Sciences Education and Research in Ghana –
Achievements, Challenges, and Prospects.

Profiles of Speakers



Prof. Samuel Kyei is a Professor

Prof. Samuel Kyei is a Professor of the Clinical Optometry, School of Optometry and Vision Science, University of Cape Coast and the Founding Director of the Biomedical and Clinical Research Centre, BCRC, University of Cape Coast.

He holds a PhD in Optometry from the University of KwaZulu-Natal, Durban, South Africa, Master of Philosophy in Pharmacology from Kwame Nkrumah University of Science and Technology, KNUST, a Doctor of Optometry Degree with BSc Ophthalmic Sciences from the University of Cape Coast.

At the international front he was identified to serve as a member of the sub-specialty working group (ocular surface and anterior eye) by the World Health Organization, WHO in contributing to the Package of Eye Care Interventions which was launched at the 75th World Health Assembly.

Prof. Kyei has served on a number of boards at the local (University), regional and national levels. He served on the Academic Board of the University of Cape Coast, College Board, College of Health and Allied Sciences, School Board, School of Allied Health Sciences, Department Board, Department Optometry and Vision Science.



Rev. Professor Harold S. Amonoo-Kuofi

Rev. Professor Harold S. Amonoo-Kuofi stands as a towering figure in medical education and healthcare leadership, renowned for his incisive intellect and unwavering commitment to excellence. He commands respect and admiration not only for his formidable credentials but for his visionary approach to health systems and professional standards.

Professor Amonoo-Kuofi is a Medical Doctor and Clinical Neuroanatomist by profession. He previously served the University of Cape Coast, first, as the Founding Dean of the University of Cape Coast School of Medical Sciences and subsequently as the first Provost of the College of Health and Allied Sciences at University of Cape Coast.

Professor Amonoo-Kuofi's academic pedigree is exemplary. He holds an M.B. Ch.B. from the University of Ghana Medical School, a Postgraduate Diploma of Education (PGDE) from the Institute of Education at the University of London, a Ph.D. in Clinical Anatomy from the Royal Free Hospital School of Medicine (University of London), a Diploma in Theology from the Assemblies of God Theological Seminary in Saltpond, and a D.Sc from the University of Cape Coast. His professional acumen is further evidenced by advanced certifications in Problem-Based Learning from Maastricht University, in Netherlands, and life support credentials from the American Heart Association. This breadth of scholarship underpins his erudite leadership and deep expertise.

International Assignments and Collaborations

With a distinguished record of international engagement, Professor Amonoo-Kuofi has contributed his expertise to the Italian Ministry of Public Health—advancing medical standards,



fostering cross-border collaboration, and spearheading the requalification of the A. M. Dogliotti Medical School in Liberia, thereby cementing his reputation as a leader of global significance.

His global perspective, forged through assignments in Europe and Africa, is matched by a pragmatic understanding of the complexities of health systems worldwide. He is a sought-after consultant, recognized for his intellect and his capacity to navigate diverse healthcare challenges with acuity.

Key Contributions

Professor Amonoo-Kuofi's influence reverberates throughout regional and international health institutions. He has been instrumental in the West Africa Health Organisation, shaping policy and championing peer review initiatives that strengthen health systems across the continent. He served as a member of the Expert Committee on Harmonization of the Curricula for Undergraduate Medical Training in the ECOWAS Region

under the auspices of the West African Health Organization (WAHO), and is a member of the Regional Council for Medical Education, ECOWAS, and the West African Health Research Network (WAHRNET)

Here at home, Professor Amonoo-Kuofi played a pivotal role as a member of the Presidential Task Force Planning Committee For The Establishment of the University of Health and Allied Sciences, at Ho, and the University of Energy and National Resources, at Sunyani - a testament to his visionary leadership and ability to translate strategy into lasting institutional achievements.

Ongoing Roles and Leadership

Professor Amonoo-Kuofi has served at the forefront of national health governance, serving as the immediate past Chairman of the CPD Committee of the Medical and Dental Council, where his judicious guidance ensured the advancement and regulation of medical and dental practice in Ghana. As Chairman of the Central Region Health Committee, he steers transformative initiatives, galvanizes collaboration, and relentlessly pursues improved health outcomes for communities.

Conclusion

Rev. Professor Harold S. Amonoo-Kuofi is the embodiment of intellectual rigor, assertive leadership, and enduring dedication. His legacy is one of brilliance, purpose, and transformative impact.



Professor Kingsley Kwadwo Asare Pereko

Professor Kingsley Kwadwo Asare Pereko, Associate Professor of Community and Public Health Nutrition at the University of Cape Coast and current Vice Dean of the School of Medical Sciences. He holds a PhD in Nutrition from the University of Ghana and has over two decades of experience in nutrition research, teaching, policy development, and public health practice.

Prof. Pereko is a leading nutrition scientist whose work has advanced maternal and child nutrition, anaemia prevention, food security, and healthy food policy in Ghana and across Africa.

He is the founding President of the Ghana Academy of Nutrition and Dietetics and currently served as Vice President of the Federation of African Nutrition Societies. He also served as the President of the Ghana Nutrition Association from 2018-2024. He has also served as a Technical Advisor to the World Health Organization, contributing to guideline development at both regional and global levels.

His recent achievements include securing the 2026 GHANA IFPP-01FPP Phase 4 Grant, leading advocacy initiatives for healthier food environments through the 2024 Global Health



Advocacy Incubator award, and receiving the prestigious Carnegie Diaspora Fellowship in 2022.

Prof. Pereko has authored and co-authored peer-reviewed publications in leading international journals, contributing important evidence on maternal nutrition, anaemia among pregnant women, child nutrition, urban food environments, and public health policy.



Frederick Kwaku Addai, PhD, FWACM, FAAIMHS,

Frederick Kwaku Addai, PhD, FWACM, FAAIMHS, is a retired Associate Professor of Anatomy with specialisation in Histology and Embryology, and a distinguished academic, researcher, educator and entrepreneur with a career spanning several decades.

He served as Head of the Department of Anatomy, University of Ghana Medical School (UGMS), from 2005 to 2018. Since 2018, he has been the President of the West African College of Morphologists (WACM). In March 2026, he was appointed Second Vice President of the African Academy of Integrated Morphology and Health Sciences (AAIMHS).

Professor Addai has made significant contributions to postgraduate education and mentorship. He has been the Lead Supervisor of more than 40 M.Phil. and two PhD graduates in Anatomy, while also assisting in the training of over 50 M.Phil. and 10 PhD graduates in Anatomy and other Health Sciences. He has served as a part-time lecturer in the Department of Anatomy, School of Medical Sciences, KNUST, since 1988, and since 2018 has continued his academic engagement as a post-retirement contract appointee in the Department of Anatomy, University of Ghana Medical School, College of Health Sciences, Korle-Bu.

As a scholar, Professor Addai is recognised as a pioneer African researcher into the health benefits of cocoa. His academic output includes 32 peer-reviewed publications and more than 100 conference presentations worldwide. His teaching experience spans three continents—Africa, Europe and the United States of America, where he has taught Anatomy, with particular emphasis on Embryology, Histology and Cell Biology.

Beyond academia, Professor Addai exemplifies “Bench to Business” innovation. His research interest in cocoa has translated into the production and



marketing of GoodFood Natural Cocoa Powder through KEL Kakawa Company Limited, demonstrating the potential for transforming scientific research into practical products and enterprise.

Professor Addai is a foundation member of the Anatomical Society of Ghana (ASoG). His professional and intellectual accomplishments have received international recognition, including his listing in Marquis Who's Who in the World in 1995. In 1998, he was recognised as a Distinguished Member of the International Society of Poets.

Outside his professional life, Professor Addai is married to Cecilia Akosua Addai, and they have four adult offspring. His career reflects a remarkable blend of academic leadership, mentorship, scientific research, professional service, innovation and entrepreneurship.

Professor Benjamin Arko-Boham, PhD

Professor Benjamin Arko-Boham, is a Ghanaian anatomist, cancer researcher, and academic leader with over two decades of distinguished service in teaching, research, and academic administration. He currently serves as Editor-in-Chief of the Health Sciences Investigations Journal and Head of the Department of Anatomy at the University of Ghana Medical School.

His research programme is centered on elucidating the molecular mechanisms underlying breast cancer aggressiveness in African populations, with particular emphasis on genetic alterations and their clinical implications. He also investigates circulating blood biomarkers, including cell-free DNA and proteins, for cancer diagnosis, prognosis, and therapeutic monitoring. In addition, he explores dermatoglyphics as a novel, non-invasive diagnostic tool, while advancing anatomy education through innovative pedagogical strategies that enhance student engagement and accessibility. His work thus bridges biomedical research with educational reform in the health sciences.

Professor Arko-Boham has contributed extensively to academic governance and professional service. He serves on several boards and committees within the University of Ghana and internationally, including the Body Donation Subcommittee of the International Federation of Associations of Anatomists (IFAA) and the African Academy of Integrated Morphology and Health Sciences (AAIMHS), where he is a Fellow and



Secretary. He has also played a pivotal role in the Anatomical Society of Ghana (ASoG), advancing anatomical sciences locally and regionally.

Beyond his institutional roles, he is an active reviewer for leading international journals and frequently organizes academic workshops and symposia, including those convened by the ASoG and the IFAA. His professional affiliations span the IFAA, the AAA, the West African College of Morphologists (WACM), and the Ghana Science Association (GSA). Through his scholarship, leadership, and service, Professor Arko-Boham exemplifies the integration of research excellence, educational innovation, and professional commitment to advancing health sciences in Ghana and across Africa.

Dr. Saviour Kweku Adjenti

Dr. Saviour Kweku Adjenti is an academic with over 20 years of teaching and research experiences in higher education. A Neurodevelopmental Anatomist by training, dynamic, passionate and gifted teacher who is devoted to the teaching of all aspects of Human Anatomy with clarity to many health sciences students and professionals especially in deprived and underprivileged institutions. His love for the healthcare profession motivates him to focus his entire career researching and learning about the intricate functioning of the complex structures of the human body and its woven connection with personal and global health.

Dr. Adjenti's understanding of Human Anatomy and its direct link to healthcare practice form the basis of his comprehensive teaching and research methods, depicting the subject to his audience always as being a tool in the hands of all healthcare practitioners without which none can navigate the complex terrain of the healthcare profession. Saviour specializes in the area of neurobiology of the musculoskeletal system, with focus on the structure and function of trunk muscles in children with cerebral palsy (a neuromuscular disorder), and structural deformities of the male germ cell. His expertise in teaching spans across Gross Anatomy, Histology, Applied Embryology/Fertility, Neuroanatomy, Neuro-psychosocial Anatomy, to both undergraduate and postgraduate students.



Dr. Adjenti's innovative teaching methods and research prowess cover such areas as anatomical techniques and embalming, reproductive anatomy/infertility and human health, biomechanics, anatomical variations and neuro-psychosocial science as well as clinical and surgical anatomy. An expert curriculum developer in clinical anatomy, applied anatomy and reproductive health. He has several impactful scholarly publications in the area of Clinical Anatomy and Global Health in leading academic journals. He is a foundational Fellow of the West African College of Morphologists (WACM) and a PhD degree from the University of Cape Town, South Africa. Currently serves as the Vice Dean of the School of Medical Sciences, Central University, Miotso, near Tema in the Greater Accra Region.

Nii Koney-Kwaku Koney, PhD

Nii Koney-Kwaku Koney PhD is a Senior Lecturer in the Department of Anatomy at the University of Ghana Medical School, where he teaches anatomy to medical students and to graduate students in anatomy and the allied health sciences. He holds an MPhil in Anatomy from the University of Ghana and a PhD in Anatomy and Cell Biology from the University of North Dakota, USA, where his doctoral research examined the processing of chromatin-associated small RNAs following promoter-proximal RNA polymerase II pausing.

His work bridges cancer research and anatomy education. In the laboratory, he investigates the molecular signatures of cancers prevalent in the Ghanaian population, including colorectal and prostate cancer, using immunohistochemistry to characterise protein-expression patterns of diagnostic and prognostic value. In parallel, he advances the modernisation of anatomy pedagogy through the integration of digital anatomy tools and artificial intelligence, evaluating virtual microscopy and Anatomage-based virtual dissection alongside traditional methods, while also studying the ethics and practice of whole-body donation in Ghana.



His research appears in both local and international peer-reviewed journals.

A Fellow of the NYU-UG Fellowship Program in Research Integrity, he reviews for several local and international journals and serves on a number of University of Ghana boards and committees. He is a Fellow of the West African College of Morphologists (WACM) and a member of the Anatomical Society of Ghana (ASoG) and the American Association for Anatomy (AAA).



Abstracts



Adjei, Marian Ewura-Esi Adjeiwa¹ and Derkyi-Kwarteng, Leonard²

¹College of Medicine and Allied Sciences North Legon, Accra-Ghana

²Department of Pathology, School of Medical Sciences, University of Cape Coast

Cape Coast, Ghana

Correspondence: meaadjei@gmail.com

Abstract

Artificial intelligence (AI) has the potential to revolutionise anatomy instruction, especially in settings with limited resources like Ghana. In order to overcome the drawbacks of conventional anatomy teaching techniques, such as restricted access to cadavers, trouble visualising intricate structures, and a lack of resources, this study investigates the potential of AI-powered tools like virtual dissections, augmented reality, and large language models (LLMs). The study assesses the viability, efficacy, and moral ramifications of integrating AI into anatomy instruction through a qualitative review.

In addition to addressing important issues like disinformation, data security, and language obstacles, it demonstrates how AI may improve student engagement, minimise resource constraints, and personalise learning experiences. To enable the successful integration of AI in Ghanaian medical education, it is suggested that pilot projects be adopted, infrastructure be invested in, and training initiatives be implemented. The study indicates that while careful implementation is necessary to address ethical and operational challenges, AI has great promise for revolutionising anatomy instruction.

**Perceptions of Assessment Modalities in Anatomy:
A Cross-Sectional Multicenter Study Among
Medical Students in Côte d'Ivoire**

ABS 02

Maman You Esperance BROALET¹, Grace DJONDE², Djibril OUATTARA², Yvan ZUNON-KIPRE², Kesse Marc-Antoine BROU², Ali GOH², Picard TOKPA¹

¹ *Department of Human Anatomy, University Alassane Ouattara, Bouake, Cote d'Ivoire*

² *Department of Human Anatomy, University Felix Houphouet-Boigny, Abidjan, Cote d'Ivoire*

Correspondence: gloriaaidoo707@gmail.com

Introduction: Despite growing international evidence supporting practical assessment in anatomy education, student perceptions of written (multiple-choice and true/false questions) versus practical assessment, and their relationship with learning approaches, remain undocumented in Francophone West Africa. We aimed to assess medical students' perceptions of written and practical anatomy assessments, and their relationship with study approaches, across Ivorian medical schools.

Methods: A cross-sectional, anonymous online survey was administered to first- and second-year medical students at three Ivorian Schools of Medicine (Abidjan, Bouaké, Korhogo) following their anatomy examinations. The validated instrument measured perceived validity, fairness, affective experience and learning value of written assessment, perception of practical assessment, perceived equity of the negative-marking system, and learning approaches, using 5-point Likert scales.

Results: 245 students participated (first-year: 96, second-year :149; mean age 19.5 ± 1.6 years). Practical assessment was rated significantly more favorably than written assessment. When asked which format best reflected true knowledge, 47% considered all formats equivalent, while practical assessment was favored over either written format alone (24% vs 17% and 12%). The combined written-practical format was the most preferred assessment design (57%). Deep learning approach correlated positively with favorable perception of written assessment ($\rho=0.44$, $p<0.001$), while surface approach correlated negatively ($\rho=-0.37$, $p<0.001$). Despite moderate perceived fairness of the negative-marking system (3.33/5), students widely reported withholding partially-known answers for fear of penalty (4.43/5).

Conclusion: Students perceive practical assessment as more valid than written formats and strongly endorse combined assessment designs. The negative-marking system, while intended to discourage guessing, appears to discourage genuine knowledge expression. These findings support institutional reflection on assessment design in anatomy education across African medical schools.

Keywords: Anatomy education; Assessment perception; Medical students; learning approaches

Practical Aspects of Anatomy Pedagogy are Perceived To Be Beneficial By Young Medical Doctors in Ghana

ABS 03

Zuweira Baba Mohammed¹, Stephen K. Amoah²

¹Tamale Teaching Hospital, Tamale

²Department of Anatomy and Cell Biology, University of Cape Coast, Cape Coast

*Corresponding Author: sakamoah@uccsms.edu.gh

Introduction

Anatomy education is foundational to the training of medical doctors. From anatomical terminology to the structural relationships and the consequences of morphological alteration, the impact of anatomy plays an immense role in shaping the training of doctors. Multiple pedagogical strategies are used such as lectures, dissections, peer groups, mannequins, and technological support. Hence, the assessment of these approaches by young doctors will reveal their significance.

Aim

To investigate the perception of young medical doctors on the significance of the modes of Anatomy curriculum delivery.

Method

This study used a cross-sectional study that administered questionnaires to young medical doctors to inquire of gross anatomy pedagogy during their student days. The modes of teaching spanned: Dissection, Prosection, Peer teaching, Didactic lectures, online videos and Laparoscopic dissection among others.

Results

The instructional modes of delivery anatomy curriculum in descending order are: lectures, dissection, mannequins, prosections, and plastination. The perceived beneficial means of teaching anatomy in descending order were: dissection, mannequins, plastination, online learning, lecture based, prosection. Overall relevance of anatomy to medical training was very high of 4.4/5 irrespective of surgical or non-surgical (sub)specialty.

Conclusion

This research reveals that gross anatomy is recognized as an important subject in the training of medical doctors. While multiple curriculum approaches are utilized, engaging methods are preferred to didactic ones as being more beneficial in the medical training.

Histological Staining Potential Of Aqueous *Lawsonia Inermis* (henna) Leaf Extract On Rat Brain Tissues: An Alternative To Eosin.

ABS 04

***¹Adjenti Kweku Saviour, ²Owusu Daniel, Aidoo, ¹Amo Gloria, ²Asiedu-Gyekye Isaac Julius.**

¹Department of Physician Assistantship Studies, School of Medical Sciences, Central University, Ghana, Miotso Campus, P.O. Box 2305, Tema. Email: sadjenti@central.edu.gh; gaidoo@central.edu.gh; ²Department of Pharmacology & Toxicology, School of Pharmacy, P. O. Box LG 43, University of Ghana, Legon, Email: dowusu005@st.ug.edu.gh; ijasiedu-gyekye@ug.edu.gh;

*Corresponding Author Email: sadjenti@central.edu.gh.

Abstract

Introduction: Histological staining is essential for microscopic diagnosis, yet the high cost of synthetic stains like Hematoxylin and Eosin (H&E) poses challenges for laboratories in developing countries. *Lawsonia inermis* (Henna) has been used traditionally in Northern Ghana as a cosmetic dye.

Aim: This study investigates the histological staining properties of aqueous *L. inermis* leaf extract on Sprague-Dawley rat brain tissues compared to standard H&E stains.

Methods: Fresh *L. inermis* leaves were harvested, dried, and processed into a powder and an aqueous extract. Brain tissues were harvested from adult Sprague-Dawley rats, processed, and stained using four protocols: moistened *L. inermis* powder embalming, aqueous extract only, hematoxylin counterstained with aqueous extract, and hematoxylin with extract as the primary stain.

Results: Direct embalming with moistened powder yielded blurred images. Staining with aqueous extract alone showed poor cellular differentiation. However, tissues stained with Hematoxylin and counterstained with *L. inermis* aqueous extract produced clear, high-contrast images comparable to standard H&E, with distinct basophilic nuclei and brownish cytoplasmic staining.

Conclusion: Aqueous *L. inermis* extract functions effectively as an acidic counterstain similar to Eosin. It offers a potential cost-effective, natural alternative for routine histological analysis in resource-constrained settings.

Key words: *Lawsonia inermis*; aqueous extracts; staining; hematoxylin; eosin; brain tissue.

Initiating A Body Donation Program in West Africa: Public Knowledge, Attitudes and Willingness in Côte d'Ivoire

ABS 05

**Yvan Zunon-Kipre¹, Grace Djonde¹, Ali Goh¹, Maman You Esperance Broalet²,
Raissa Diaby¹, Kesse Marc-Antoine Brou¹, Marc Sidoine Gbazi¹, Landry Konan¹,
Medard Kakou¹**

¹Department of Human Anatomy, University Felix Houphouet-Boigny, Abidjan, Côte d'Ivoire

*²Department of Human Anatomy, University Alassane Ouattara, Bouake, Cote d'Ivoire
Correspondence: djondegrace@gmail.com*

Introduction

In most west african anatomy laboratories, cadaveric supply still relies on unclaimed bodies obtained without informed consent, raising major ethical and legal concerns. Establishing a formal body donation program requires a prior assessment of community acceptability. This study aimed to explore knowledge, attitudes, and personal willingness regarding body donation for anatomical teaching and research among the Ivorian population.

Methods

A descriptive cross-sectional survey was conducted in may 2026 using a self-administered online questionnaire disseminated via social media platforms. The instrument comprised five sections: sociodemographic data, prior knowledge, attitudes assessed through three likert-scale blocks (general attitudes; cultural and religious perceptions; trust and safety), personal intentions, and open comments. Participants aged 18 years and above with Ivorian nationality were eligible. Descriptive statistics and chi-square tests were performed.

Results

A total of 196 participants were included. The majority were aged under 40 years (87.2%), male (58.7%), with university-level education (97.4%), and residing in Abidjan (82.1%). Christians (catholics and protestants/evangelists) accounted for 66.9% and muslims for 24.5% of respondents. 78.6% described themselves as practicing or very practicing in their religion.

Prior awareness of body donation was high (90.8%); however, 63.3% were unaware of any existing legal framework in côte d'ivoire. Overall general attitudes were favorable (mean likert score block a: 4.09/5), with 93.3% agreeing that body donation improves medical training and 80.6% agreeing that students need to work on real bodies. Cultural and religious barriers were moderate (mean score block b: 3.19/5); only 13.3% believed their religion explicitly prohibits body donation. Trust and safety perceptions were positive (mean score block c: 3.87/5), with 81.1% stating that a strict legal framework would reassure them.

Overall, 47.4% expressed willingness to donate their body (16.3% unconditionally; 31.1% under specific conditions). Key conditions cited included: guarantee of

educational use only (42.3%), family consent or blessing (33.2%), and a clear legal framework (32.7%). The program was deemed useful or absolutely necessary by 80.6% of respondents, and 84.2% declared they would recommend it to others.

Conclusion

This study provides the first empirical evidence of social acceptability for a body donation program in côte d'ivoire. Despite moderate religious and cultural barriers, public openness is substantial, particularly when legal and ethical safeguards are guaranteed. These findings will directly inform the design of a national body donation framework and community engagement strategies adapted to the west african context, with potential for replication across the sub-region.

Keywords: body donation · anatomy education · west africa · public perception · côte d'ivoire

**Benjamin Arko-Boham^{1,*}, Nii Koney-Kwaku Koney¹, Paul Apomvoese Atia¹,
Johnny Andoh-Arthur², Joshua Tetteh³, Eric Aidoo⁴, Ellen Afriyie Mensa-Bonsu⁵,
Valerie Ayele Atttoh Dordoye⁶, Eric Fakuu⁷, Isaac Mensah Bofo⁸**

¹Department of Anatomy, University of Ghana Medical School, University of Ghana, Accra, Ghana

²Department of Psychology, School of Social Sciences, University of Ghana, Legon, Accra ³Department of Anatomy, School of Medical Sciences, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana

⁴Department of Anatomy, School of Medical Sciences, University of Cape Coast, Cape Coast, Ghana

⁵Department of Physiotherapy, University of Health and Allied Sciences, Ho, Ghana

⁶Department of Peri-Operative Nursing, School of Peri-Operative and Critical Care Nursing, Korle-Bu, Accra.

⁷Department of Anatomy, School of Medicine, University of Development Studies, Tamale, Ghana

⁸Department of Sociology, School of Social Sciences, University of Ghana, Legon, Accra.

Correspondence: barko-boham@ug.edu.gh

Abstract

Introduction: Whole-body donation (WBD) provides a vital supply for anatomical research, hands-on surgical practice, and morally grounded medical instruction. By offering lawful and dignified material for training, WBD lessens reliance on informal or illicit sources. Despite these benefits, WBD remains unpopular in Ghana, and little empirical work has explored what influences public readiness to donate. This study examined obstacles and incentives surrounding WBD to inform targeted education efforts and policy measures.

Methods: We employed a mixed-methods design combining an online questionnaire completed by 1,570 individuals with follow-up semi-structured in-depth interviews. The instrument incorporated established scales assessing knowledge and attitudes (Cronbach's alpha = 0.816). Associations between demographic characteristics and WBD-related outcomes were tested using chi-square analyses and trend tests.

Results: Participants were mainly young, well-educated (92.2% with tertiary qualifications), and predominantly Christian (87.1%). Although 89.7% reported awareness of WBD, comprehensive understanding was limited. Only 19.0% scored in the high-knowledge range, and 21.4% expressed favorable attitudes. Ethnicity ($p=0.009$), occupation ($p<0.001$), and level of education ($p<0.001$) were significant predictors of knowledge, with higher educational levels linked to more positive perceptions. No meaningful associations were observed for age, sex, or religion. Commonly cited objections framed WBD as "un-African" and as denying families customary burial closure. Additional deterrents included faith-based objections and skepticism about the ethical conduct of public health organizations.

Conclusion: High awareness of WBD in Ghana does not equal acceptance. Culturally sensitive outreach addressing emotional and religious concerns and improving transparency about ethical safeguards through university and clinical partnerships could raise donor registration and strengthen anatomical training resources nationwide.

Keywords: Whole-Body Donation, Bequeathal Programmes, Attitudes, Ghana, Sociocultural Impediments

Prevalence And Socio-Demographic Variables of Substance Use Disorders and Depression at the Ankaful Psychiatric Hospital

ABS 07

Esi Bon Berko¹, Stephen K. Amoah²

¹Cape Coast Teaching Hospital, Cape Coast

²Department of Anatomy and Cell Biology, University of Cape Coast, Cape Coast

*Corresponding Author: skamoah@uccsms.edu.gh

Introduction: Depression and substance use disorders (SUDs) such as Cannabis use, Alcohol use, and Multi-drug use, are a leading source of morbidity and disability globally. There is a paucity of published data on the prevalence of and the socio-demographic variables that influence development of these conditions in Ghana.

Aim: To determine the prevalence and associated factors of mental health disorders at the Ankaful Psychiatric Hospital over a five-year period (2018-2022).

Methods: A retrospective cross-sectional study was conducted using medical records from the Ankaful Psychiatric Hospital. Socio-demographic variables including age, sex, marital status, level of education, and employment status were assessed. Bivariate as well as multivariate analysis were used to identify socio-demographic predictors of Cannabis use, Alcohol use, Multi-drug use and Dementia over the five-year period.

Results: The greatest proportion of mental health disorders diagnosed at the Ankaful Psychiatric Hospital was Cannabis use (30.9%), Alcohol use (27.4%), Multi-drug use (17.8%) and Dementia (23.9%), were among the top five mental health disorders diagnosed at the Ankaful Psychiatric Hospital from 2018 to 2022. These four disorders are observed in varying incidence in each of the five years spanning 2018-2022. Socio-demographic predictors significantly associated with both schizophrenia and depression include age, marital and employment status. The average age year (standard deviation) of are: 27.4 (7.5), 40.1 (12.5), 28.1 (8.6) and 64.4 (8.8) are Cannabis use, Alcohol use, Multi-drug use and Dementia, respectively. These socio-demographic factors identified reveal groups at risk and factors that influence outcomes.

Conclusion: This study highlights SUDs and depression are contributors to the mental health burden at the Ankaful Psychiatric Hospital and demonstrates that key socio-demographic factors influence their occurrence. By providing local epidemiological data, these findings contribute to the understanding of mental health patterns in Ghana and underscore the need for targeted public health interventions, improved resource allocation, and further research to inform evidence-based mental healthcare delivery.

Keywords: Cannabis use, Alcohol use, Multi-drug use, Dementia, socio-demographic factors.

**Anatomical Distribution Of Injuries Among Road Traffic
Accident Victims: A Retrospective Cross-sectional Study At
Catholic Hospital, Battor In The Volta Region Of Ghana.**

ABS 08

Saviour Kweku Adjenti¹, Mary Olabode-Anthony¹

¹Department of Physician Assistantship Studies, School of Medical Sciences, Central University, Miotso Campus, P. O. Box 2305, Tema, Ghana.

Correspondence: sadjenti@central.edu.gh

Abstract

Introduction: Road traffic accidents (RTAs) are a critical public health challenge, particularly in low- and middle-income countries where they cause significant morbidity and mortality. Despite the high volume of trauma cases, there is limited facility-based evidence regarding specific injury patterns in peri-urban Ghanaian hospitals.

Aim: To determine the common anatomical sites of injuries among victims of road traffic accidents presenting at the Catholic Hospital Battor and evaluate any possible association between injury types and the causes of accidents.

Methods: A retrospective cross-sectional study was conducted at Catholic Hospital Battor in the Volta Region. Clinical records of 110 RTA victims managed between January and December 2024 were reviewed using a consecutive sampling technique. Data were analyzed using SPSS version 22 to assess injury patterns and associations with demographic variables.

Results: The most common anatomical sites of injury were the lower limbs, upper limbs, and head. Vulnerability was highest among pedestrians and motorcyclists, who frequently sustained multiple injuries. Young adult males constituted the majority of the study population, and injury patterns showed a significant association with gender and road user category.

Conclusion: Limb and head injuries are the predominant trauma outcomes at this facility. Interventions should focus on strengthening road safety enforcement, enhancing trauma care capacity, and targeting public education toward high-risk groups.

Keywords: Road traffic accident, anatomical profile, trauma, head injury, trunk, limb injury.

Prevalence and Socio-Demographic Predictors of Mental Health Disorders Reported at The Ankaful Psychiatric Hospital.

ABS 09

Esi Bon Berko¹, Stephen K. Amoah²

¹Cape Coast Teaching Hospital, Cape Coast

²Department of Anatomy and Cell Biology, University of Cape Coast, Cape Coast

*Corresponding Author: skamoah@uccsms.edu.gh

Introduction: Although mental health disorders are a leading source of morbidity and disability globally, there is a paucity of published data on the prevalence of mental disorders and socio-demographic variables that influence development of these conditions in Ghana. Aim: To determine the prevalence and associated factors of mental health disorders at the Ankaful Psychiatric Hospital over a five-year period (2018-2022).

Methods: A retrospective cross-sectional study was conducted using medical records from the Ankaful Psychiatric Hospital. Socio-demographic variables including age, sex, marital status, level of education, and employment status were assessed. Bivariate as well as multivariate analysis were used to identify socio-demographic predictors of schizophrenia and depression; the two leading disorders identified over the five-year period.

Results: The greatest proportion of mental health disorders diagnosed at the Ankaful Psychiatric Hospital was schizophrenia (29.9%), with depression coming in second (11.7%). Additionally, bipolar disorder (11.5%), unspecified primary psychotic disorders (11.2%) and cannabis use disorder (7.1%) were among the top five mental health disorders diagnosed at the Ankaful Psychiatric Hospital from 2018 to 2022. These four disorders are observed in varying incidence in each of the five years spanning 2018-2022 with schizophrenia remaining the highest. Socio-demographic predictors significantly associated with both schizophrenia and depression include age, marital and employment status. These socio-demographic factors identified reveal groups at risk and factors that influence outcomes.

Conclusion: This study highlights schizophrenia, depression, bipolar disorder, and unspecified primary psychotic disorders as major contributors to the mental health burden at the Ankaful Psychiatric Hospital and demonstrates that key socio-demographic factors influence their occurrence. By providing local epidemiological data, these findings contribute to the understanding of mental health patterns in Ghana and underscore the need for targeted public health interventions, improved resource allocation, and further research to inform evidence-based mental healthcare delivery.

Keywords: Mental health disorders, prevalence, socio-demographic predictors, psychiatric epidemiology, Ghana.

Prevalence of Work-Related Musculoskeletal Disorders among Intra-City Commercial Minibus Drivers and Conductors in Kumasi Metropolitan Area of Ghana **ABS 10**

Samuel Bimpong

Department of Anatomy, KNUST

Correspondence: samuel.bimpong@knust.edu.gh

Abstract:

Background: Musculoskeletal disorders (MSDs) are disorders associated with the muscular and skeletal systems in the body which principally provide support and movement. Body regions most often affected include neck, shoulders, lower back, lower limbs and upper limbs.

Objective: This study therefore aimed at determining the prevalence of WMSDs among intra-city commercial minibus drivers and conductors in the Greater Kumasi Metropolitan Area, Ghana.

Results: Blood pressure, blood sugar level and body mass index variables. 60.7% conductors and 39.2% drivers had normal pressure levels, 30.9% and 40.4% high as well as 8.4% and 20.4% very high blood pressure levels were observed among the conductors and drivers respectively. The differences in blood pressures observed were statistically significant ($p = 0.001$). Similarly, 92.7% of the conductors and 91.9% of drivers had normal fasting blood sugar levels, 5.1% conductors and 4.2% drivers were pre-diabetic with 2.2% conductors and 3.8% drivers being diabetics. The overall prevalence of musculoskeletal pains was 79%. That is Nearly 8 out of 10 commercial drivers or conductors experience work-related musculoskeletal pains. Most affected pain regions were lower back (72%), lower limb (54%), neck (45%) and shoulder (44%).

Conclusion: There was high WRMSD prevalence among the intra-city commercial minibus drivers and conductors in the Greater Kumasi Metropolis. Body regions mostly affected were lower back, lower limb, neck and shoulder. The study observed females getting involved in the commercial minibus driving and conductor businesses.

Key words: Musculoskeletal, Commercial minibus, Conductor, Disorder, Intra-city, Greater Kumasi

Stereological Quantification of Collagen at the Materno-Fetal Zone in Preeclamptic and Normal Placenta

ABS 11

Correspondence: salifumoses87@gmail.com

Background: Preeclampsia is a serious pregnancy complication manifested as maternal hypertension in pregnancy and fetal growth restriction, and a major contributor to maternal and perinatal morbidity and mortality worldwide.

It has been reported that extracellular matrix (ECM) could influence and regulate trophoblast invasion and participate in the remodeling of the decidua at the materno-fetal interface. Collagen is one of the most abundant components of ECM, regulating cellular biological behavior and providing the structural integrity of human tissues. Over deposition of collagen may affect the remodeling of uterine spiral arteries and may be an important factor in the pathogenesis of preeclampsia. However, there is a lack of compartment-specific quantitative analyses of collagen accumulation, and limited data exist on the quantification of collagen deposition in preeclamptic placentae by stereology.

Aim: To quantify collagen deposition at the materno-fetal zone preeclamptic and normal placentae.

Methodology: This study will be a retrospective cross-sectional study, involving 60 placental samples, 30 each from preeclamptic placentae and normal placentae (control). Placental tissue samples will be obtained for histological processing, microscopic examination, and stereological analysis. Data analysis will be conducted using SPSS version 29. The collagen deposition between preeclamptic and normal placenta groups will be compared using the student's t-test for normally distributed data or Mann-Whitney test if not. A p-value ≤ 0.05 at a 95% confidence interval will indicate significance.

Expected outcome: This research is expected to provide insights into the deposition of collagen in preeclamptic placentae, thereby providing a deeper understanding of the pathogenesis of preeclampsia and contributing to improved therapeutic intervention

Immunohistochemical Landscape of PTEN Expression in Prostate Cancer Tissue from Korle Bu Teaching Hospital.

ABS 12

Logo Sylvester, Nii Koney-Kwaku Koney, Benjamin Arko-Boham, Afua Owusua Darkwah Abrahams

Department of Anatomy, University of Ghana Medical School, Accra, Ghana

Correspondence: nkkoney@ug.edu.gh

Introduction: Prostate cancer (PCa) is the second most diagnosed cancer and fifth leading cause of cancer death in men globally. In Ghana, it is the leading male cancer, with over 80% of patients presenting at advanced stage at Korle Bu Teaching Hospital (KBTH). Loss of the tumour suppressor gene PTEN, a negative regulator of the PI3K/AKT/mTOR pathway, occurs in up to 40% of primary and 60% of metastatic PCa and is strongly associated with aggressive disease. Notably, 42% of West African men exhibit PTEN loss, yet no study has systematically characterised PTEN protein expression in a Ghanaian PCa cohort, representing a critical knowledge gap.

Aim: To determine the immunohistochemical expression of PTEN protein in archived prostate cancer tissue from KBTH and correlate findings with clinicopathological parameters including age at diagnosis, serum PSA, perineural invasion, and Gleason/tumour grade.

Method: This is a retrospective descriptive study. Formalin-fixed paraffin-embedded (FFPE) tissue blocks from PCa cases diagnosed between 2020 and 2025 were retrieved from the KBTH Pathology Department archive. Following data extraction from the laboratory information system, 59 cases were excluded due to missing PSA values, unspecified age, or ambiguous diagnosis, yielding 143 eligible cases. H&E-stained slides were reviewed by a consultant pathologist for adequate tumour representation, and corresponding FFPE blocks were selected for IHC sectioning. PTEN protein expression will be assessed using the validated anti-PTEN antibody (clone SP218) on an automated IHC platform. Expression and Staining will be scored using a qualitative and semi-quantitative approach, respectively. Statistical associations will be analysed using Chi-square, Mann-Whitney U, and logistic regression tests.

Result: Data collection and IHC staining are currently ongoing. A final cohort of cases anticipated will be used for analysis. Results will be presented at the conference.

Conclusion: This study will generate the first systematic IHC-based molecular characterisation of PTEN expression in Ghanaian PCa, providing population-specific data with direct implications for risk stratification and precision oncology in a high-burden, resource-limited setting.

Introduction: Appendicitis is one of the most common surgical emergencies worldwide, resulting from inflammation of the vermiform appendix attached to the cecum. Although pain is classically localised at McBurney's point, the lack of consensus regarding its precise position, as highlighted by the studies of Karim and Naraysing, continues to fuel diagnostic and surgical debate. These uncertainties emphasise the need for a clearer understanding of the anatomical variations of the cecum and appendix to improve clinical accuracy and surgical outcomes.

Purpose: To describe and analyse anatomical variations of the cecum and vermiform appendix in order to assess their topographical and clinical implications. It is hypothesised that these variations influence the location of McBurney's point and may affect diagnostic accuracy and surgical planning. The study also aims to propose a standardised anatomical nomenclature for McBurney's point, which could enhance its clinical and surgical relevance.

Methods: A prospective descriptive study on the vermiform appendix was conducted between January 2017 and December 2022 in three hospitals in Kinshasa. The sample comprised 160 patients, selected by non-probability convenience sampling, who underwent midline infra-umbilical laparotomy. Intraoperative observations were collected, entered into Excel, and analysed using SPSS v20.0. Proportions were compared using the chi-square test, with statistical significance set at $p < 0.05$.

Results: In the study population ($n = 160$), females predominated (115; 71.9%, sex ratio = 2.56), and younger subjects were overrepresented, with the 11–20-year age group being the most frequent (60; 37.5%). The iliac position of the cecum was the most common (95; 59.4%), and a mobile cecum was observed in 124 cases (77.7%). The appendiceal base corresponded to the midpoint of McBurney's line in 52 patients (32.5%). The appendix was mainly cylindrical (129; 80.6%), with a length between 7 and 12 cm in 86 patients (53.8%). The iliac position of the cecum predominated among patients aged 3–22 years (57; 35.6%), with a statistically significant difference ($p = 0.023$).

Conclusion: The study confirms the anatomical variability of the cecum and appendix. The cecum was predominantly mobile in the right iliac fossa, and the appendix, cylindrical and of medium length, often adopted a descending position. The appendicular base projected mainly on the umbilical–spinal line, justifying the use of the terms *mid umbilical–spinal point* and *lateral umbilical–spinal point*. These findings support promoting the laparoscopic approach to improve appendicitis management and reduce complications associated with anatomical variations.

**Patterns of Infectious Disease Identified in Clinical Autopsy.
The Role of Autopsy as an Ancillary Study in
Determining the Cause of Death.**

ABS 14

Khaba CM¹, Nkwagatse TM¹, Dikotope M¹, Makhado N^{1,2,3}

¹*Department of Anatomical Pathology, Sefako Makgatho Health Sciences University, South Africa*

²*Department of Medical Microbiology, Sefako Makgatho Health Sciences University, South Africa*

³*Dr George Mukhari National Health Laboratory Services, Pretoria, South Africa*

Correspondence: nkwagatse@gmail.com

Introduction And Objectives: Infectious diseases are prevalent in clinical autopsies. Despite its value, the use of autopsies has decreased, and infectious diseases are often undiagnosed or misdiagnosed due to the lack of pathological understanding. The main objective of this study was to investigate the prevalence and pattern of infectious disease from autopsy samples in our centre.

Methods: This was a cross-sectional descriptive study which involved evaluation of all autopsies with the final cause of death as "infectious disease" for a period of 8 years. The clinicopathologic data was retrieved from the laboratory information system, captured in Excel and analyzed using STATA.

Results: The study enrolled 55 autopsies which comprised of 37 females (67.3%) and 18 males (32.7%) with mean aged 33 years, 96% were black, 3.64 % white and (18.2%) pediatric decedents (under the age of 14). HIV/AIDS (35.85%) was the most frequent comorbidity followed by hypertension (18.87%), cancer (11.32%), Diabetes Mellitus (9.43%), Chronic Bronchitis and congenital heart disease (3.77%). The most prevalent aetiology in this study was multilobar pneumonia (36.36%) followed by bronchopneumonia (21.82%), tuberculosis (12.73%), Cryptococcus infection (9.09%), Disseminated cytomegalovirus (5.36%), bacterial meningitis, disseminated candidiasis and mucormycosis (3.64%). Malaria, ineffective endocarditis and Covid-19 Infections were (1.82%).

Conclusion: The most prevalent infectious disease at autopsy is HIV/AIDS. The use of autopsy for years has been the gold standard for establishing aetiology and have played a valuable role in the diagnosis and understanding of diseases. Autopsies have also informed public health strategies in the fight against these communicable diseases.

Structural Congenital Malformations Reported at Patients of the Paediatrics Unit in Cape Coast Teaching Hospital.

ABS 15

Abigail Aba Botchway¹, Stephen K. Amoah²

¹Department of Obstetrics and Gynaecology, Effia Nkwanta Hospital, Takoradi

²Department of Anatomy and Cell Biology, University of Cape Coast, Cape Coast

*Corresponding Author: skamoah@uccsms.edu.gh

Introduction: Structural congenital malformations remain a major cause of childhood morbidity and mortality, particularly in low- and middle-income countries where diagnostic and preventive resources are limited. This study describes the epidemiology of structural congenital malformations among pediatric patients at the Cape Coast Teaching Hospital (CCTH) from 2018 to 2022.

Methods: A descriptive cross-sectional design was employed, using retrospective hospital records. A stratified random sample of 203 cases was analyzed from a total of 425 recorded cases. Data on demographic characteristics, maternal factors, types of anomalies, and associated outcomes were extracted and analyzed using descriptive statistics.

Results: The study found that males (55.7%) were more frequently affected than females (44.3%). Most cases occurred in children under five years, Maternal age ranged widely with the modal group in 20–39 years. More than half of mothers (51.2%) had fewer than the recommended eight antenatal visits, and 10.8% reported alcohol use during pregnancy. The results are presented as structural anomalies category (percentage): Neural tube defects 61(30%), Musculoskeletal defects 43(21.2%), Cardiac defects 42(20.7%), Genitourinary defects 17(8.4%), Chromosomal disorders 17(8.4%), Gastrointestinal defects 12(5.9%), Craniofacial defects 11(5.4%), Total 203(100%). The top three malformations are: spina bifida (12.3%), polydactyly (10.3%), and hydrocephalus (9.4%).

Conclusion: The findings highlight the persistence of preventable anomalies such as neural tube defects despite available preventive strategies underscores the importance of strengthening antenatal care, expanding folic acid supplementation and fortification programs, and improving early detection and surgical interventions. The establishment of congenital anomaly surveillance systems with community and hospital-based evidence on prevalence, patterns, and maternal correlates are indispensable for enhanced advocacy and policy development aimed at reducing the burden of congenital anomalies in Ghana.

Keywords: structural congenital anomalies, paediatric patients, spina bifida, psychiatric epidemiology, Ghana.

Valerie A A Dordoye¹, Bismarck A Hottor¹, Kevin K Adutwum-Ofosu¹, Richard M Blay¹, Rashid A Adams², Samuel Mensah¹, John Ahenkorah¹, Paul A Atiah¹, Sethina A Adjetey¹, Nii K K Koney¹, Benjamin Arko-Boham¹, Frederick K Addai¹

¹Department of Anatomy, University of Ghana Medical School, College of Health Sciences, University of Ghana, Accra, Ghana; ²Department of Medical Laboratory Sciences, School of Biomedical and Allied

Sciences, University of Ghana, Accra, Ghana

Correspondence: valayelettah@yahoo.com

Introduction: Diabetic wounds (DWs) represent a major clinical challenge due to impaired healing, which predisposes affected individuals to complications such as infection, chronic ulceration, and lower-limb amputation. Persistent hyperglycaemia disrupts critical wound-healing processes, including re-epithelialization and dermal cell proliferation, while the accumulation of advanced glycation end products (AGEs) further compromises tissue repair. Natural cocoa is rich in polyphenolic compounds with antioxidants, anti-inflammatory, and antihyperglycaemic properties that may facilitate wound healing in diabetes.

Aim: This study evaluated the effect of natural cocoa powder on wound healing in a streptozotocin (STZ)-nicotinamide-induced rat model of type 2 diabetes mellitus (T2DM).

Methods: Type 2 diabetes mellitus was induced in rats using nicotinamide and streptozotocin. Diabetic animals were randomly assigned to either a cocoa-treated diabetic group (DC) or an untreated diabetic group (DU), while non-diabetic rats served as controls (C). The DC group received 2% aqueous natural cocoa for six weeks. Standardized full-thickness dorsal excisional wounds were created, and tissue biopsies were collected on days 0, 3, 7, and 14 post-wounding. Wound healing was assessed by measuring wound contraction, epidermal thickness, and dermal cell counts using histological techniques. Insulin-like Growth Factor-1 (IGF-1) expression was evaluated by immunohistochemistry.

Results: Cocoa-treated diabetic rats exhibited significant increases in epidermal thickness during the healing period (27.42 pixels; $p = 0.015$), whereas untreated diabetic rats demonstrated only modest, non-significant improvements (24.87 pixels, $p = 0.093$). The non-diabetic control group consistently maintained the greatest epidermal thickness ($p = 0.0042$). Furthermore, the cocoa-treated diabetic group showed significantly greater wound contraction (86.187%; $p = 0.0066$) than the untreated diabetic group (80.572%; $p = 0.0124$) and achieved wound closure rates comparable to those of the non-diabetic controls (88.31%; $p = 0.0035$). In contrast, untreated diabetic rats displayed the slowest rate of wound closure.

On day 14, epidermal IGF-1 expression was significantly lower in untreated diabetic rats than in non-diabetic controls (+++). Although dermal IGF-1 expression did not differ significantly among groups, cocoa-treated diabetic rats exhibited a trend toward higher IGF-1 expression (++) compared with untreated diabetic rats (+).

Conclusion: These findings suggest that natural cocoa may promote diabetic wound repair through mechanisms involving accelerated re-epithelialization and modulation of growth factor expression, despite having no significant effect on HbA1c levels.

EFFECTS OF AEROBIC EXERCISE VERSUS DIET REVERSAL ON METABOLIC PROFILES AND HISTOMORPHOLOGY OF THE LIVER AND ADIPOSE TISSUE IN OBESE RATS.

ABS 17

Abudzie Alex¹, Richard Michael Blay¹, Samuel Adjei²

¹*Department of Anatomy, University of Ghana.*

²*Noguchi Memorial Institute for Medical Research*

Background: Obesity, a condition characterised by excess visceral adipose tissue, is a major risk factor for diabetes, cardiovascular disease, liver disorders, and certain cancers. Treatment options remain limited, and there is ongoing debate as to which lifestyle intervention (dietary modifications or physical exercise) is the more effective strategy for reversing obesity-related tissue damage.

Aim: To compare the effects of diet reversal (DR) and aerobic exercise (AE) on visceral adipose tissue and liver histomorphology in high-fat diet-induced obese rats.

Methods: A total of 30 male Sprague-Dawley (SD) rats (6-8 weeks old) will be randomly assigned to five groups: Control (standard chow), High-Fat Diet (HFD) only, HFD + AE, HFD + DR, and HFD + DR + AE. Obesity was induced in male Sprague-Dawley rats over an 11-week high-fat feeding period. Obese animals were then randomised into four groups (n = 6/group) for a 6-week intervention. Body weight, fasting blood glucose, oral glucose tolerance (OGTT), visceral adipose tissue (VAT) mass and adiposity index, hepatic enzymes (ALT, AST), lipid profile, and anthropometric obesity indices (Lee's index, BMI) were assessed. Data were tested for normality (Shapiro-Wilk) and analysed using parametric or non-parametric tests as appropriate ($\alpha = 0.05$).

Results: HFD feeding produced significant obesity, hyperphagia (by energy), hyperglycaemia, and elevated Lee's index/BMI (all $p < 0.01$) relative to CON. During intervention, dietary withdrawal normalised OGTT glucose tolerance, hepatic ALT/AST, and lipid profile toward control values, while AE alone conferred only partial, largely adiposity-independent benefit (early glycaemic improvement, partial AST reduction, elevated HDL-C) without reducing visceral adiposity or normalising ALT or glucose tolerance. Only the combined DR+ AE group achieved full, statistically confirmed reversal of Lee's index and BMI ($p < 0.05$ vs HFD Only and HFD + AE).

Conclusion: In established diet-induced obesity, diet reversal, not exercise, is the primary driver of metabolic recovery; aerobic exercise adds measurable but selective benefit. Combined intervention produced the most complete reversal of the obese, dysmetabolic phenotype.

Keywords: Obesity, diet-reversal, aerobic exercise, liver, visceral adipose tissue, rats

Approaches For Identifying Anatomical Structures Of The Face And Neck Using Cadaveric Specimens

ABS 18

**Chatigre RK, Ouattara DC, Gbazi M, Djonde G,
Brou Kesse M, Zunon-Kipre Y, Kakou M.**

Laboratory of Normal Anatomy, Experimental surgery, and Bioméchanics

Correspondence: rchatigre2@yahoo.com

Introduction : Human body dissection is one of the fundamental components of anatomical studies. Research in experimental surgery requires dissections surgery simulations. Both of which are currently experiencing significant growth. However there are very few dissection manuals available to guide the procedures, and the existing manuals do not provide dissection designed for experimental surgery.

Aim : to propose cadaveric dissection techniques of the face and neck in adult subjects for the study of the anatomical structures of the face and neck.

Materials Et Methods : Materials : ten fresh, no formalin fixed human specimens obtained from the laboratory of normal anatomy in abidjan.

Methods : dissection of face and neck of the african cadaveric subjects using different surgical approaches from inferior to superior and from superior to inferior, follow by dissection from superficial to deep planes and then deep to superficial planes.

Results : Several dissection techniques were identified depending on the organs of interest and the specific objectives of the dissection

We present dissection approaches from superior to inferior and from inferior to superior, as well as from superficial to deep and from deep to superficial, which are not described in conventional dissection manuals. This study enabled us to propose alternative dissection techniques for certain anatomical structures of the head and neck, differing from those described in the classical manuals used in Cote d'Ivoire, particularly the manual authored by ROUVIERE.

Conclusion : This study aims to promote research in clinical anatomy, particularly in experimental surgery in our region where very few reference works are available. It provides students, surgeons, and anatomists with alternative dissection techniques that may complement those described in conventional anatomical dissection manuals.

Keywords : dissection, face, neck, anatomical education

Perceptions of mothers and caregivers of children with birth defects seeking treatment at the Trauma and Specialist and Winneba Municipal Hospitals in the Central Region of Ghana.

ABS 19

¹Saviour Kweku Adjenti, ¹Millicent Whadjah. ¹Gifty Selorm Amenyia.

¹Department of Physician Assistantship Studies, School of Medical Sciences, Central University, Miotso Campus, P. O. Box 2305, Tema, Ghana.

Correspondence: sadjenti@central.edu.gh

Abstract

Introduction: Birth defects are a significant public health concern, particularly in low-resource settings where maternal beliefs heavily influence healthcare decisions. In Ghana, congenital anomalies are often attributed to spiritual causes or maternal wrongdoing, leading to delays in medical intervention.

Aim: This study aims to explore the perceptions of mothers of children with anatomical birth defects who access healthcare services at Trauma and the Municipal Hospitals in the Winneba. By delving into their lived-experiences, the study seeks to illuminate the challenges they face, the support systems they rely on, and their expectations of healthcare providers with regard to anatomical birth defects of their children.

Methods: Guided by the Health Belief Model, this study employed a quantitative descriptive cross-sectional design involving 50 mothers and caregivers in the Effutu Municipality. Structured interviews and questionnaires assessed maternal beliefs, health-seeking behaviors, and caregiving experiences.

Results: Findings revealed that 48% of caregivers felt their health-seeking behaviors were influenced by cultural beliefs. While biomedical explanations were acknowledged, cultural norms and stigma significantly impacted decisions, with rural caregivers more likely to utilize traditional interventions. Emotional bonding was initially compromised by shock but generally strengthened over time.

Conclusion: The study highlights the critical need for culturally sensitive education and collaboration with traditional leaders to improve healthcare utilization and family resilience.

Keywords: Anatomical Birth Defects, Caregiver Perceptions, Health Belief Model, Ghana, Health-seeking Behaviour

Digitopalmer Dermatoglyphic Patterns are Associated with Children Living with Cerebral Palsy and Their Mothers.

ABS 20

Gloria Aidoo¹, Saviour Adjenti¹, John Ahenkorah², Benjamin Arko-Boham², Nii Koney-Kwaku Koney², Kevin Adutwum-Ofosu², Frederick Kweku Addai², Bismarck Afedo Hottor²

¹*School of Medical Sciences, Central University*

²*Department of Anatomy, University of Ghana Medical School*

Correspondence: gloriaaidoo707@gmail.com

Introduction: Dermatoglyphics, the study of epidermal ridge patterns on the fingers, palms, and soles, reveals distinct patterns established under genetic control during embryogenesis, which remain stable throughout life. These dermatoglyphic patterns have shown associations with several genetic and developmental conditions, suggesting their potential as non-invasive biomarkers. Investigating these patterns in relation to cerebral palsy, a major childhood disability may provide information on genetic predispositions and early diagnostic indicators.

Aim: To investigate the digito-palmar dermatoglyphic patterns associated with cerebral palsy (CP).

Method: This case-control study involved 132 participants: 33 children with cerebral palsy (cases) and their mothers, and 33 children without CP and their mothers (controls), recruited through purposive (cases) and convenience (control) sampling. Seven dermatoglyphic variables were analyzed by two independent observers through direct visualization of palmar prints obtained from both hands using a biometric scanner. Pearson's Chi-square test was applied to compare variable frequencies between the study groups.

Results: The loop pattern is the predominant pattern in the two hands among all the study groups. Right thumb, left thumb, left index and middle fingers showed increased whorl and arch patterns and decreased loop among CP children compared to those without. The right index finger, and the left thumb and index finger of the mothers with CP children had lesser loops but increased whorls and arches than mothers without CP children. The average a-b ridge count in the left palm (34.55 (SD=4.2) of CP children was significantly less than in the left palm for the normal children (36.33, SD = 2.7; p = 0.044).

Conclusion: These findings suggest that specific dermatoglyphic patterns, particularly increased whorl and arch frequencies and reduced a-b ridge counts in certain digits, may serve as indicators of cerebral palsy risk. The a-b ridge count on the left palm, in particular, emerges as a potential predictive marker, highlighting a possible genetic link in CP development.

**Sciatic Nerve Division Patterns in an Ivorian Cadaver Series :
A Dual Classification Approach Integrating Beaton-Anson
Criteria And Regional Anatomical Level.**

ABS 21

**Grace Ella Armande DJONDE^{1,2}, Kesse Marc-Antoine BROU^{1,3}, Marc Sidoine
GBAZI^{1,2}, Raissa DIABY^{1,2}, Martial OM MOULOT⁴, Guy Romaric KOFFI⁵, Morel
AKA¹, Jacques KARIDIOULA¹, Ali GOH¹, Paul KOFFI¹, Yvan ZUNON-KIPRE^{1,2}
Medard KAKOU^{1,2}**

¹Department of Human Anatomy, School of Medicine, University of Felix Houphouët-Boigny, Abidjan, Cote d'Ivoire. ²Department of Neurosurgery, CHU Yopougon, University of Felix Houphouët-Boigny, Abidjan, Cote d'Ivoire.

³Department of Radiology, Institute of Cardiology, University of Felix Houphouët-Boigny, Abidjan, Cote d'Ivoire. ⁴Department of Pediatric Surgery, CHU Treichville, University of Felix Houphouët-Boigny, Abidjan, Cote d'Ivoire.

⁵Department of Physical Medicine and Rehabilitation, CHU Angre, University of Felix Houphouët-Boigny, Abidjan, Cote d'Ivoire

Correspondence: djondegace@gmail.com

Background: Sciatic nerve division patterns have important implications for posterior hip surgery, regional anesthesia, and piriformis syndrome management. The Beaton-Anson classification, based on the relationship between the nerve and the piriformis muscle, remains the reference standard but may fail to capture clinically relevant anatomical heterogeneity within the "normal" Type A category. This study aimed to document sciatic nerve division patterns in an Ivorian cadaveric series using both Beaton-Anson criteria and regional anatomical level of division, and to propose an integrated dual classification approach.

Methods: Seventy-six lower limbs from 38 formalin-fixed adult cadavers (37 males, 1 female) were dissected bilaterally at the Department of Human Anatomy, University Félix Houphouët-Boigny, in Abidjan, Côte d'Ivoire. Each limb was classified according to Beaton-Anson criteria and assigned to one of six regional division levels (pelvic, high gluteal, low gluteal, proximal thigh, mid-distal thigh, popliteal). Division pattern type (bifurcation or trifurcation) and bilateral symmetry were also recorded.

Results: Using Beaton-Anson criteria, 74 limbs (97.4%) were classified as Type A and 2 (2.6%) as Type B; no cases of Types C–F were observed. Regional level classification identified 2 limbs (2.6%) dividing at Level 2 (high gluteal) and 12 limbs (15.8%) at Level 3 (low gluteal), comprising 10 bifurcations and 2 trifurcations. The remaining 62 limbs (81.6%) were divided at Level 5 (mid-distal thigh).

Conclusion: Regional level classification identified 14 limbs (18.4% of total sample) as presenting gluteal-level division, a clinically significant finding undetectable by Beaton-Anson criteria alone. The integration of both classification systems provides complementary information essential for surgical risk stratification, anesthetic planning, and piriformis syndrome assessment. These findings support the routine documentation of both nerve-muscle relationship and regional division level in anatomical and clinical studies of the sciatic nerve.

Assessment of the Normal Ocular Biometry in Adult Patients: **ABS 22** Magnetic Resonance Imaging Study

**Gloria E. Abadom¹, Beryl S. Ominde^{2*}, Joyce E. Ikubor³,
Lawrence C. Achapu⁴, Patrick S. Igbigbi⁴**

¹Department of Ophthalmology, Delta State University Teaching Hospital, Oghara, Nigeria. ²Department of Biomedical Sciences, Aga Khan University, Nairobi, Kenya

³Department of Radiology, Delta State University Teaching Hospital, Oghara, Nigeria

⁴Department of Human Anatomy and Cell Biology, Delta State University, Abraka,

Correspondence: berylominde@gmail.com

Introduction: Ocular biometry is variable in different populations. Appreciation of this diversity is important in the treatment of glaucoma and lens pathologies

Aim: To determine the normal range of globe biometric parameters and their association with gender and age.

Methods: This cross-sectional study was retrospectively conducted using brain magnetic resonance imaging (MRI) scans archived in the radiology department of a Teaching hospital in Delta State Nigeria. After obtaining institutional approval, 150 adult scans (75 males and 75 females) were selected using the purposive sampling technique. Metric parameters of the lens, anterior chamber and vitreous were measured using a digital caliper, analyzed and summarized in descriptive statistics. Comparison across gender, side and age groups as well as association between variables were conducted using inferential statistics. Significance level was set at 5%.

Results: The anterior chamber depth (ACD), superoinferior (SI), vitreous depth, and anteroposterior (AP) lens diameters were symmetrical. There were no significant sex differences in the variables. The SI and AP lens diameters varied across the 10 years' age groups and had a significant positive correlation with age ($P < 0.05$). However, the vitreous length and ACD had a negative association with age.

Conclusion: The study established normal reference ranges for ocular biometry that will provide a useful guide in the studied population especially in the diagnosis of eye conditions, management of cataract and the design of intraocular lenses.

Morphometric Study Of The Optic Radiations Using Diffusion Tensor MRI Tractography In Black African Adults: Anatomical Landmarks And Clinical Implications.

ABS 23

Raissa Diaby^{1,2}, Grâce Djondé^{1,2}, Marc-Antoine Kessé^{1,3}, Marc Gbazi^{1,2}, Morel Aka^{1,4}, Landry Konan^{1,2}, Richard Chatigre^{1,5}, Yvan Zunon-Kipré^{1,2}, Médard Konan Kakou^{1,2}

¹Laboratory of Human Anatomy, Department of Basic Sciences, Félix Houphouët Boigny University, Abidjan, Côte d'Ivoire. ²Neurosurgery department, Teaching hospital of Yopougon, Abidjan, Côte d'Ivoire. ³Radiology

department, Teaching hospital of Treichville, Abidjan, Côte d'Ivoire.

⁴OBGYN department, Teaching hospital of Cocody, Abidjan, Côte d'Ivoire.

⁵ENT Department, Teaching Hospital of Cocody, Abidjan, Côte d'Ivoire

Correspondence: rahisdiaby@gmail.com

Introduction : Preservation of the optic radiations, particularly Meyer's loop, remains a major challenge during temporal lobe surgery because of its marked anatomical variability. Existing morphometric data are derived predominantly from non-African populations, leaving a significant gap in anatomical reference values for Black African individuals. Population-specific data are essential for improving surgical planning and reducing postoperative visual field deficits.

Aim : To establish MRI tractography-based morphometric reference values of the optic radiations in Black African adults and evaluate their relevance for neurosurgical practice.

Methods : A retrospective cross-sectional study was conducted in 32 neurologically normal Black African adults. Diffusion tensor imaging was acquired using a 3-Tesla MRI scanner (32 diffusion directions; $b = 1000 \text{ s/mm}^2$). Bilateral optic radiations were reconstructed using deterministic tractography. Morphometric analysis included measurements between Meyer's loop and major temporal lobe landmarks, tract dimensions, hemispheric asymmetry, and the influence of age and sex.

Results : Considerable interindividual variability of the optic radiations was demonstrated. The mean distance from the temporal pole to the anterior limit of Meyer's loop was **19.6 mm**, with the loop most commonly located beneath the middle temporal gyrus. Potentially hazardous anatomical configurations, defined by a distance of less than **5 mm** between Meyer's loop and the temporal horn, were identified in **15.6%** of participants. Significant sex-related differences were observed, with males exhibiting a more anteriorly positioned Meyer's loop. No meaningful association with age was identified except for a slight reduction in tract width. These findings highlight substantial variability in surgically relevant anatomical relationships.

Conclusion : This study provides one of the first diffusion tensor MRI tractography-based morphometric datasets describing the optic radiations in a Black African population. The marked variability observed supports the routine integration of individualized preoperative tractography when planning temporal lobe surgery and establishes population-specific anatomical reference values for clinical anatomy, neuronavigation, and microsurgical education.

Keywords : Optic radiations; Diffusion tensor imaging; MRI tractography; Morphometry; Black African population.

Morphometric Analysis of the Foramen Magnum in a Ghanaian Population: A Radiological Study Using Computer Tomography (CT) Imaging **ABS 24**

**Eric Aidoo¹, Ato Ampomah Brown¹, Gordon Kyei¹, Stephen K. Amoah¹,
Andrew Smith², Samuel Ennin Afrifa²**

¹Department of Anatomy and Cell Biology, School of Medical Sciences, University of Cape Coast, Cape Coast, Ghana.

²School of Medical Sciences, University of Cape Coast, Cape Coast, Ghana.

Correspondence: a.eric@uccsms.edu.gh

Abstract

Introduction: The foramen magnum (FM) is an opening in the posterior cranial fossa of the skull. FM serves as the conduit between the brain and the spinal cord and transmits critical neurovascular structures, including the medulla oblongata and vertebral arteries. The morphometric parameters of FM, particularly its length, width, area, and shape, have been shown to vary across populations, sexes, and with age. Advancements in diagnostic imaging such as computed tomography (CT), magnetic resonance imaging (MRI), CT and MR angiography (CTA/MRA), and ultrasound in pediatric cases have significantly enhanced the visualization and assessment of the foramen magnum.

Aim: To analyze the morphometric characteristics and variations of the foramen magnum in a Ghanaian population using CT scan data.

Methodology: BeeDicom viewer will be used to measure the Anterior-posterior and the transverse diameters. The area of the FM will be calculated using the Radinsky's formula: $\text{Area} = \pi \times \text{APD} \times \text{TD}$.

Results: Data collection is ongoing.

Conclusion: Africans often reference datasets derived from Caucasian, Asian, or Middle Eastern cohorts, which may not accurately reflect the anatomical norms of West African populations. This research aims to fill that gap by evaluating foramen magnum morphometry in adult Ghanaians using archival CT imaging and will provide reference values specific to the Ghanaian population, which are currently underrepresented in global morphometric datasets.

Keywords: foramen magnum, computed tomography, skull, morphometry

ENVIRONMENTAL ENRICHMENT AMELIORATES BEHAVIOR BUT NOT HISTOMORPHOLOGY OF HIPPOCAMPUS AND TESTES IN A RAT MODEL OF DEPRESSION

ABS 25

Rebecca Kemi Oyeniyi¹, Kevin Adutwum-Ofosu¹, Thomas Tagoe²

¹*Department of Anatomy, University of Ghana Medical School, Accra*

²*Department of Physiology, University of Ghana Medical School, Accra*

Background: Chronic stress precipitates depressive-like behavior and associated structural and biochemical disturbances across central and peripheral organs. This study examined whether environmental enrichment (EE) mitigates behavioral, histological, and biochemical changes produced by chronic unpredictable mild stress (CUMS) in male Sprague–Dawley rats.

Methods: Twenty-one rats were randomly assigned to three groups (n = 7): control, CUMS (stress only; 8 weeks), and CUMS + EE (stress plus two hours/day enrichment for 6 weeks). Behavioral assessments were done before and end of study. After terminal procedures, hippocampal and testicular tissues were processed for histology, serum testosterone and TNF- α were measured by ELISA.

Results: CUMS induced hallmark depressive-like behaviors: reduced sucrose preference and exploratory activity, and increased immobility in the forced swim test. Concurrent EE improved behavioral outcomes although not all measures reached conventional significance. Histologically, stress produced reductions in neuronal counts across hippocampal subfields, with the dentate gyrus showing a statistically significant decline. Testicular architecture was markedly affected by CUMS. EE produced partial recovery in spermatogenic and Sertoli compartments but did not restore testicular or hippocampal structure to control levels within the study timeframe. Serum assays revealed no significant group differences in testosterone or TNF- α , indicating limited systemic biochemical change under these experimental conditions.

Conclusion: EE confers measurable behavioral resilience against chronic stress but yields only partial or no structural and biochemical recovery after the present enrichment duration. These findings suggest that longer or combined interventions may be required for full morphological and molecular restoration.

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