



British Association of Clinical Anatomists



# BACA Winter Scientific Meeting 2024 Tuesday 17 December

## Suttie Centre

School of Medicine, Medical Sciences and Nutrition, University of Aberdeen AB25 2ZD

# Theme

Anatomy and Technology: Transforming Education, Research, and Practice

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# Welcome

Welcome to the Winter Scientific Meeting of the British Association of Clinical Anatomists hosted by Prof. Jayasinghe

The BACA meeting is held at The Suttie Centre for Teaching & Learning in Healthcare, Foresterhill, Aberdeen. AB25 2ZD on Tuesday 17th December, 2024

The **Association Dinner** is at 19.00hrs on 17th December at Atholl Hotel, 54 King's Gate, Aberdeen. AB15 4YN

Please purchase tickets in advance



Monday 16th December, BACA Trustees and Council Room 223 Suttie Centre

Trustees of BACA meeting 15:00-16:00 hrs Council of BACA meeting 16:00—19:00 hrs

# Welcome

A warm welcome to all delegates of the British Association of Clinical Anatomists (BACA) Winter Meeting 2024 at the University of Aberdeen!

Founded in 1495, the University of Aberdeen holds the distinction of being Scotland's third-oldest university and the fifth-oldest in the UK. Today, it is home to a diverse community of over 14,000 students and 3,600 staff from more than 130 nationalities. Recognized for its academic excellence, the University ranks among the top 15 universities in the UK, according to both the *Guardian University Guide* 2025 and the *Times and Sunday Times Good University Guide* 2025.

The meeting will take place in the state-of-the-art Suttie Centre, situated at the heart of the Foresterhill Health Campus. This purpose-built facility serves as a hub for teaching and learning for students, healthcare staff, and practitioners. As one of the largest health campuses in Europe, Foresterhill provides a dynamic and collaborative environment for advancing healthcare education and research.

Beyond the academic experience, Aberdeen offers a vibrant and inspiring setting. Known for its historic charm, creative energy, and cosmopolitan community, the city is a unique blend of tradition and modernity. Delegates will find something for everyone, from the bustling city centre of Europe's Energy Capital to the stunning nearby coastlines and countryside.

Aberdeenshire, too, is a region of unparalleled natural beauty. Explore its majestic castles, winding rivers, dramatic mountains, and picturesque landscapes—perfect for those looking to unwind and connect with nature.

We hope your time at the BACA Winter Meeting will be both academically enriching and personally rewarding, as you experience the warmth, beauty, and history of Aberdeen and Northeast Scotland.

Welcome once again, and enjoy your stay!

Professor Jaya Jayasinghe, University of Aberdeen



Dear Delegates,

It is a pleasure for BACA to be at the University of Aberdeen for our winter scientific meeting. We wish to thank Professor Jayasinghe for extending the invitation to host our BACA meeting.

Congratulations to all the presenters for getting your work accepted for presentation today. Please make the most of the opportunity, enjoy the day, and get to know others in the field. We look forward to seeing you again at future BACA meetings!

Best Wishes,

Phil Adds (BACA President) Andy Ginty (BACA Meetings Secretary)

BACA Council MembersPresidentPhil AddsTreasurerNeil AshwoodMembership secretaryCecilia BrassettMeetings secretaryAndy GintyDuncan Hamilton, Bip Choudhury, Meena Swamy, Jenny Clancy,<br/>Peter Dangerfield, Joanna Matthan



# Programme

Time	Event	
08:30	Registration and Refreshments	Suttie Centre
09:15	Meeting Open	Dr Philip Adds, BACA President
09:20	Welcome to the University	Prof. David Blackbourn, Head of the School of Medicine, Medical Sciences and Nutrition, University of Aberdeen.
09:30	Welcome by the host	Prof. Jaya Jayasinghe, Chair in Oral Sciences, University of Aberdeen.
09:35	Plenary I:	Professor Maria Cristina Manzanares- Céspedes University of Barcelona, Spain. "Clinical anatomy of the Temporomandibu- lar Joint".
10:30	Oral Session I	Medical Education in Anatomy Presentations
11:20	Coffee break	135 , 1 <sup>st</sup> floor
11:30	Poster session	PI-PI14
12:30	Lunch	135 , I <sup>st</sup> floor
13:00	BACA AGM	
13:30	Plenary 2	Regius Professor Simon Parson University of Aberdeen "Anatomy@Aberdeen: then and now"
14:30	Oral Session 2	Head and Neck Anatomy Presentations
15:20	Coffee break and posters	135 , 1 <sup>st</sup> floor
15:50	Oral Session 3	Back and Upper Limb Anatomy Presenta- tions
16:20	BACA 2025	Dr Philip Adds, BACA President
16:30	Raffle draw and conference end	
19:00	Conference dinner (pre- booked only)	Atholl Aberdeen Hotel

# **Presentations**

#### **Oral Presentations**

Each talk should last for a maximum of <u>7 minutes</u>. The session Chair will have to keep to time and will stop you if you run over. Three minutes will be allowed for questions by the audience. Ensure you upload your presentation prior to the start of the session you are presenting at.

#### **Poster Presentations**

Posters must be no larger than A0 size (portrait). Poster presentations will be given to BACA Council members as well as fellow delegates. You will be given <u>3 minutes</u> to summarise your poster findings to the assembled group and 2 minutes to answer any questions. You will then be expected to listen to the other poster presentations in your group and participate in asking questions.

#### Poster session (11.30-12.30)

PI, P2, P3, P4, P5 = group I P6, P7, P8, P9, P10, = group 2 PII, P12, P13, P14 = group 3

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# **BACA** Prizes and Awards

Did you know BACA offers a range of prizes and scholarships? Apply for these now our webpage: <u>https://www.baca-anatomy.co.uk/</u>pages/15-prizes-awards

# **BACA Sponsorship**

BACA will sponsor other events that it deems suitable that promote the dissemination of clinical anatomy and anatomical education research.

# **Conference Prizes**

Member and open prizes are awarded at every meeting.

# **BACA Annual National Student Essay**

Students from the UK and Ireland are invited to submit an essay, between 1000-1500 words, discussing a specific topic.

## **BACA Scholarships**

Awards will be made available twice yearly to aid research into clinical anatomy and anatomical education.

## Public Engagement Awards

Awards of £50 will be made available to those who wish to carry out public engagement events related to human anatomy. Events will primarily be aimed at members of the general public.

## **BACA** Anatomical Art Competition

BACA members from all around the world are invited to submit an original drawing, painting, sketch or digitally created artwork for BACA Anatomical Art Competition.

09:15	Meeting Open
	Dr Philip Adds, BACA President
09:20	Welcome to the University
	Prof. David Blackbourn, Head of the School of Medicine, Medical Sciences and Nutrition, University of Aberdeen.
09:30	Welcome by the host
	Prof. Jaya Jayasinghe, Chair in Oral Sciences, University of Aberdeen.
09:35	Plenary I: "Clinical anatomy of the Temporomandibular Joint". Professor Maria Cristina Manzanares-Céspedes University of Barcelona, Spain.
10:30	Session 1— Medical Education in Anatomy Chair Dr Jenny Clancy

1. Alexander Fletcher<sup>1,2,3,4</sup>, Thomas Thazhumpal Mathew<sup>1,3</sup>, Maartje KÃrner<sup>5</sup>, Briony Frost<sup>5</sup>, David Riches<sup>6</sup>, David Hu<sup>2,3,4</sup>, Umair Mahmud<sup>3</sup>, Orestis Paschalis<sup>2</sup> & Cecilia Brassett<sup>3</sup> 2 School of Clinical Medicine, University of Cambridge Human Anatomy Centre, Department of Physiology, Development and Neuroscience, University of Cambridge 4 Downing College, University of Cambridge 5 School of Biological Sciences, University of Cambridge 6 Gonville & Caius College, University of Cambridge Interactive Anatomy: Reflections on the Creation of the Cambridge Virtual Anatomy Museum

# 2. Venkatesh Asha, University of Aberdeen Improving the neuroanatomical teaching of tracts using action research

3. Yasir Hassan Elhassan<sup>1</sup>, Emad Ali Albadawi<sup>1</sup>, Asim M Almughamsi<sup>2</sup>, Sayed Nazar Imam<sup>1</sup> and Muayad Saud Albadrani<sup>3 1.</sup> Department of Basic Medical Sciences, College of Medicine, Taibah University, Al-Madinah Al-Munawara 42354, Saudi Arabia<sup>2.</sup> Department of Surgery, College Of Medicine, Taibah University, Madinah, Saudi Arabia <sup>3.</sup> Department of Family and Community Medicine and Medical Education, College of Medicine, Taibah University, Al-Madinah Al-Munawara 42354, Saudi Arabia Enhancing Anatomical Proficiency and Clinical Application through Portfolio-Based Learning: A Randomized Controlled Trial Among Medical Students 4. Hamilton, Duncan L<sup>1</sup>, Philip J Adds<sup>2</sup> <sup>1</sup>. University Hospitals Tees University of Sunderland School of Medicine . <sup>2</sup>St George's, University of London **Parallel Terminology in Clinical Anatomy** 

5. Ungar, Eva Judit\*, Stavriana Heracleous\*, Ehren Agarwal, Jake Barnes, Florence Bradshaw, Siddhant Nayak, Ansh Tandon, William Tan, Edward Wakefield, Ferdinand Zoettl, Sarah Fawcett And Cecilia Brassett Human Anatomy Centre, Department of Physiology, Development and Neuroscience, University of Cambridge, Cambridge UK Is there a difference in the performance of pre-clinical vs. clinical medical students in theoretical vs. practical tests of sonography and anatomy knowledge? (CamSASH 2024)

11:30	Poster Session
13:00	BACA Annual General Meeting
13:30	Plenary 2 "Anatomy@Aberdeen: then and now" Regius Professor Simon Parson University of Aberdeen
14:30	Session 2: Head and Neck Anatomy
	Chair Mr. Duncan Hamilton

6. Soni Gargi<sup>1,2</sup>, Vaishali Khatri<sup>1,2 1</sup> American University of Caribbean, St. Maarten <sup>2</sup>University of Central Lancashire, Preston, United Kingdom **Evaluation of feedback** from a short anatomy course for practising dentists

7. Sven Wilhelm Odelberg;<sup>1</sup>,<sup>2</sup> Sarah O'Callaghan;<sup>2</sup>,<sup>3</sup> Thomas Thazhumpal Mathew;<sup>1</sup>,<sup>2</sup> Cecilia Brassett;<sup>2</sup> Vijay Santhanam.<sup>1</sup> <sup>1</sup>Department of Oral and Maxillofacial Surgery, Addenbrooke's Hospital, Cambridge <sup>2</sup>Human Anatomy Centre, Department of Physiology, Development and Neuroscience, University of Cambridge <sup>3</sup>Gonville and Caius College, University of Cambridge **Room for Leeway Margin of Safety to Facial Nerve in Retroauricular Approaches to Mandibular Condyles** 

8. Mannickal Thankappan Sreeja <sup>1</sup> P Vatsalaswamy, Leo Rathinaraj Antony Soundararajan<sup>1</sup>, Sonje Preethi <sup>2</sup> Purushottam Rao Manvikar <sup>2</sup> <sup>1</sup> School of Health and Social Care Professions Buckinghamshire New University, UK. <sup>2</sup>Dr DY Patil Medical college. Pune, India **Morphometric analysis of human hypoglossal nerve nucleus – A journey throughout the early gestation.** 

9. Olivia A James, Faye Bennett Department of Clinical Anatomy, University of Leeds. Faces of the Future: Optimising neurovascular outcomes of facial transplantation

#### Session 3: Back and Upper Limb Anatomy

Chair: Dr Cecilia Brassett

10. Kallat Hari, Aonghas Strachan, David Chorn, Jaya Jayasinghe. School of Medicine, Medical Sciences and Nutrition, University of Aberdeen, Aberdeen, UK. The functional outcomes of tendon transfer surgery using flexor carpi ulnaris versus flexor carpi radialis in patients with radial nerve palsy

II. Michael Weekes, Abdus Burahee, Christopher McGhee, Paul Malone, Dominic Power UHB NHS trust Hand Centre, HaPPeN research Team **A cadaveric feasibility study for a triple nerve transfer technique to restore elbow flexion after upper brachial plexus injury** 

12. Mannickal Thankappan, Sreeja Leo Rathinaraj Antony Soundararajan. Buckinghamshire New University, UK. **Does core muscle weakness in patients** with chronic low back pain alter selected pulmonary function parameters?

- 16:20 BACA 2025
- 16:30 Raffle draw
- 19:00 Conference dinner Atholl Aberdeen Hotel

15:50





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# ORAL PRESENTATIONS SESSION I: MEDICAL EDUCATION

I. Alexander Fletcher<sup>1,2,3,4</sup>, Thomas Thazhumpal Mathew<sup>1,3</sup>, Maartje KÃrner<sup>5</sup>, Briony Frost<sup>5</sup>, David Riches<sup>6</sup>, David Hu<sup>2,3,4</sup>, Umair Mahmud<sup>3</sup>, Orestis Paschalis<sup>2</sup> & Cecilia Brassett<sup>3</sup> <sup>1</sup>Joint first author <sup>2</sup> School of Clinical Medicine, University of Cambridge <sup>3</sup>Human Anatomy Centre, Department of Physiology, Development and Neuroscience, University of Cambridge <sup>4</sup> Downing College, University of Cambridge <sup>5</sup> School of Biological Sciences, University of Cambridge <sup>6</sup> Gonville & Caius College, University of Cambridge **Interactive** 

# Anatomy: Reflections on the Creation of the Cambridge Virtual Anatomy Museum

The closure of the Cambridge Anatomy Museum in the late 1980s led to a lack of easily accessible information on the history and current organisation of anatomy teaching at the university. The creation of a virtual anatomy museum aims to inspire public engagement with anatomy through the online display of historical models as well as describing how anatomy is taught, creating a resource that can be used in educational settings. An initial survey was conducted of the target audience, i.e., the general public, to assess the most appropriate content for the museum. Of 81 respondents, 74 (91%) would like to hear interviews with professors, 44 (54%) wanted to learn more about the anatomy of the head, and 40 (49%) were interested in the history of anatomy teaching in Cambridge. Visits were also made to 9 anatomy museums across the UK, using a proforma-based appraisal form to gain an understanding of best practice. While differing in approach, all museums shared a similar focus in maintaining audienceappropriate content. We present a proof of concept for our virtual museum, incorporating interviews, 3D scans and high-resolution images of specimens using the Articulate 360 platform, along with sections on history, pathology, and current teaching practices.

# 2. Venkatesh Asha, University of Aberdeen Improving the neuroanatomical teaching of tracts using action research

Understanding spinal pathways and clinical presentations due to lesions at different levels is frequently considered difficult. The literature suggests that a sound neuroanatomical education can prevent future neurophobia among healthcare students. Taught as a lecture in our institution, students struggled with higher-level outcomes (e.g. clinical presentation). A tutorial session was introduced (2022) one week post-lecture. Students passed wires through Perspex brainstem 3D models. As part of action research, the experience and student feedback were critically analysed leading to a better understanding of the layered curricular approach. Adopting its principles, the lecture content was decreased to solely cover tract pathway. After students were allowed time to assimilate this, the tutorial initially reinforced pathways before adding the next layer of knowledge (consequences of lesions and clinical application). Students used 3D Perspex models or drew on 2D templates. Selfdeclared confidence level increased by 78.65%. A layered approach to teaching breaks down tasks affording students the choice and opportunity to incrementally learn and apply complex knowledge. Such an approach can easily be adapted to other areas of learning and teaching and promotes inclusive learning. This service evaluation of existing teaching sessions did not require ethical permission. Survey participation was optional and consent was implied.

3. Yasir Hassan Elhassan<sup>1</sup>, Emad Ali Albadawi<sup>1</sup>, Asim M Almughamsi<sup>2</sup>, Sayed Nazar Imam<sup>1</sup> and Muayad Saud Albadrani<sup>3 I.</sup> Department of Basic Medical Sciences, College of Medicine, Taibah University, Saudi Arabia<sup>2.</sup> Department of Surgery, College Of Medicine, Taibah University, Madinah, Saudi Arabia<sup>3.</sup> Department of Family and Community Medicine and Medical Education, College of Medicine, Taibah University, Saudi Arabia Enhancing Anatomical Proficiency and Clinical Application through Portfolio-Based Learning: A Randomized Controlled Trial Among Medical Students

This study utilized mixed methods and a randomized control design to assess the effect of portfolio-based learning in enhancing the anatomical skills and motivation of the enrolled third-year medical students at Taibah University, KSA. 150 students were randomly placed in control (traditional learning) and experimental (portfolio-based learning with clinical consolidation) groups. An Objective Structured Practical Examination (OSPE) was conducted to measure students' performance; the score obtained over eight stations was out of 80. It was observed that the experimental group's median score was 72, whereas that of the control group was 60, clearly indicating overall performance improvement. In Station 7, in which clinical application was not employed, no significant difference between the groups' performance was observed; this shows how important it is for students to use clinical applications in a new way to improve their performance in the clinical setting. Thematic analysis of students' focus group discussions indicated that the experimental group had more engagement, relatedness, competence, and autonomy, which buttressed the tenets of self-determination theory. In contrast, the control group expressed problems with practical relevance, including little engagement. The study suggested that portfolio-based learning increases students' effectiveness in learning clinical anatomy and can be incorporated into other medical subjects.

# 4. Hamilton, Duncan L<sup>1</sup>, Philip J Adds<sup>2 1.</sup>University Hospitals Tees University of Sunderland School of Medicine .<sup>2.</sup>St George's, University of London **Parallel Terminology in Clinical Anatomy**

The language of anatomy has a long and complex history, with contributions from Latin, Greek, and Arabic, as well as modern European languages. In the latter part of the 20th century and the 21st century formal Latin terminology has largely given way to informal English anatomical and clinical terms. Anatomical terminology is constantly evolving. While academic anatomists tend to adhere to standard terminology, clinicians often use alternative or parallel terminology, generally in combination with traditional nomenclature, which is of value in facilitating communication in day-to-day clinical practice. For the purpose of description these anatomical neologisms can be divided into two categories: anatomical constructs and colloquialisms. Anatomical constructs are more formal, and utilise accepted anatomical terms, but in a novel way to describe or composite features that, while relevant to clinicians, do not appear in the standard anatomical lexicography. Examples include the â€~intertransverse complex, the paravertebral space, and the erector spinae plane. Colloquialisms, in contrast, use everyday language to describe anatomical features, often as they appear to the observer in medical imaging. An example of this is the term corner pocket, which describes the point at which the subclavian artery meets the first rib as visualised on ultrasound imaging.

5. Ungar, Eva Judit<sup>\*</sup>, Stavriana Heracleous<sup>\*</sup>, Ehren Agarwal, Jake Barnes, Florence Bradshaw, Siddhant Nayak, Ansh Tandon, William Tan, Edward Wakefield, Ferdinand Zoettl, Sarah Fawcett And Cecilia Brassett Human Anatomy Centre, Department of Physiology, Development and Neuroscience, University of Cambridge, UK. Is there a difference in the performance of pre-clinical vs. clinical medical students in theoretical vs. practical tests of sonography and anatomy knowledge? (CamSASH 2024)

Integrating clinical skills into pre-clinical anatomy teaching is seen as beneficial. However, there are ongoing discussions about the proper timing and implementation process, with a common purpose of maintaining the balance between the two arms of medical education. As CamSASH (Cambridge Student Academy of Sonography est Heidelberg) believes in early integration of clinical skills teaching, we were interested in how our 2024 student group would perform on different types of tests after 5 days of sonography teaching during CamSASH. We hypothesised that pre-clinical students (n=14) perform better in the theoretical tests, and worse on technical aspects compared to clinical students (n=6). Using Welch's t-tests, there was no significant difference in the scores for practical skills of sonography, but clinical students performed significantly better on theoretical tests (t=2.16, p=0.00826). While our hypothesis was wrong, we think that the little difference in the practical performance supports CamSASH's standpoint that sonography should be taught early in anatomy teaching and that students are capable of acquiring this skill with no previous practical experience. Further research should investigate whether clinical exposure facilitates fact retention, improving the performance of clinical students on theoretical tests, thus further supporting CamSASH's model.

# SESSION 2: HEAD AND NECK ANATOMY

6. Soni Gargi<sup>1,2</sup>, Vaishali Khatri<sup>1,2</sup> <sup>1.</sup> American University of Caribbean, St. Maarten <sup>2.</sup>University of Central Lancashire, Preston, United Kingdom **Evaluation of feedback from a short anatomy course for practising dentists** 

Knowledge of head and neck anatomy is crucial for the dentists for a safe and effective clinical practice. Delivering core knowledge of anatomy in the form of short courses or workshops will help assimilation, retention and application in clinical practice and provide a strong base for clinical developments. The aim of this research was to analyse the benefits of a one-day intensive workshop in core and clinical anatomy for dental practitioners. This was a questionnaire based qualitative study to analyse the feedback provided by the participants registered for a one-day intensive course in Anatomy conducted in the years 2022 and 2023. The feedback questionnaire containing 8 open ended questions was collected at the end of the course. Responses were received from all the participants (n=30). The qualitative data were analysed to identify common themes, challenges, and improvement suggestions. There was a consensus that revisiting core and clinically relevant anatomy was significant for daily clinical practice. The participants believed that this course reinforced their knowledge of clinical anatomy required for succeeding in professional exams.

BAA

7. Sven Wilhelm Odelberg;<sup>1</sup>,<sup>2</sup> Sarah O'Callaghan<sup>23</sup> Thomas Thazhumpal Mathew<sup>1</sup>,<sup>2</sup> Cecilia Brassett<sup>2</sup> Vijay Santhanam<sup>1</sup> <sup>1</sup>Department of Oral and Maxillofacial Surgery, Addenbrooke's Hospital, Cambridge <sup>2</sup>Human Anatomy Centre, Department of Physiology, Development and Neuroscience, University of Cambridge <sup>3</sup>Gonville and Caius College, University of Cambridge Room for Leeway Margin of Safety to Facial Nerve in Retroauricular Approaches to Mandibular Condyles

Background: In maxillofacial surgery, accessing the mandibular condyle is a contested topic. Whilst retroauricular approaches are considered protective of the facial nerve, the distance from incision to nerve had not been verified in studies. Methods: Cavaderic dissection of 29 specimens were carried out using a retroauricular approach. All donors provided consent prior to decease for the use of their bodies in anatomical research after death in compliance with the Human Tissue Act 2004. Three measurements were repeated; vertical tissue thickness from inferior apex of incision to facial nerve, tissue thickness from incision to nerve laterally, and tragal pointer to nerve, a well described landmark. Results: Tragal pointer measurements were consistent with literature at an average of 14.28 mm with an intraclass correlation coefficient (ICC) of 0.59. Inferior tissue thickness averaged 9.70 mm with an ICC of 0.42, and lateral tissue thickness averaged 7.17 mm with an ICC of 0.59. Inferior tissue thickness demonstrated the greatest inter-specimen standard deviation (3.09 mm) and lowest individual specimen measurements (0.99 mm). Conclusion: The retroauricular approach remains safe and viable to access the mandibular condyle. Care should be taken to the inferior extent of incision when incising past the ear canal, particularly when supervising trainees.

# 8. Mannickal Thankappan Sreeja <sup>1</sup> P.Vatsalaswamy, Leo Rathinaraj Antony Soundararajan <sup>1</sup>, Sonje Preethi <sup>2</sup> Purushottam Rao Manvikar <sup>2</sup> <sup>1</sup> School of Health and Social Care Professions Buckinghamshire New University, UK. <sup>2</sup>Dr DY Patil Medical college. Pune, India Morphometric analysis of human hypoglossal nerve nucleus – A journey throughout the early gestation.

The Hypoglossal Nerve (12th cranial nerve) controls the movements of the tongue. It is a motor nerve that facilitates speech, swallowing, chewing, drinking, and the modulation of respiration. Morphometric analysis of its neurons in the early gestational periods (10 to 24 weeks) will help us understand their growth dynamics and implications for functional development. The tissues from the hypoglossal nucleus of 12 foetuses collected from the Dr. D.Y. Patil Medical College Hospital were categorized into four groups based on gestational age and crown-rump length (CRL). The examination involved conventional processing and staining techniques, including Haematoxylin and Eosin, and Holme's Silver Nitrate stain. A morphometric assessment measured cell dimensions and volumes, allowing the calculation of growth coefficients between cell and nuclear volumes. The analysis revealed that primitive migratory cells in early gestation develop into spherical neuroblasts. Notably, during the first 16 weeks, the nucleus predominantly occupied the entire neuron volume, indicating significant developmental changes in cellular architecture. The early stages of hypoglossal neuron development are characterized by substantial morphometric changes, with implications for the maturation of motor functions associated with the tongue. Understanding these dynamics could inform clinical approaches to address speech and swallowing difficulties arising from hypoglossal nerve damage. Ethical Approval was obtained from Dr. DY Patil Medical College, Hospital and Research Centre, Pune, India

# 9. Olivia A James, Faye Bennett Department of Clinical Anatomy, University of Leeds. Faces of the Future: Optimising neurovascular outcomes of facial transplantation

Facial transplantation is a division of reconstructive surgery which aims to improve the function and appearance of individuals with severe facial disfigurement. The procedure uses allogeneic tissue, harvested from a brain-dead donor, to replace damaged facial components of a living recipient. To date, 49 face transplants (partial and full) have been performed worldwide. This study presents a literature review evaluating different techniques which could optimise neurovascular outcomes and subsequently improve function and appearance of the graft. Sensory recovery of the graft occurs spontaneously through natural regeneration of the trigeminal nerve's cutaneous branches. Motor recovery, however, relies on precise coaptation of donor and recipient facial nerves using microsurgical sutures, reinforced by fibrin glue. The use of a thoracodorsal nerve graft can further improve outcomes by ensuring a tension-free coaptation and facilitating exclusion of the parotid gland, which can cause complications when included in the graft. Pre-operative vascular assessment of both the donor and recipient is another crucial consideration. Computer tomography angiography and digital subtraction angiography can be used to plan and enable successful end-to-end or end-to-side anastomosis of vessels. If applied in future facial transplantation procedures, these techniques could help enhance recovery, improve functional outcomes and lead to greater patient satisfaction.







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# SESSION 3: BACK AND UPPER LIMB ANATOMY

10. Kallat Hari, Aonghas Strachan, David Chorn, Jaya Jayasinghe. School of Medicine, Medical Sciences and Nutrition, University of Aberdeen, Aberdeen, UK. The functional outcomes of tendon transfer surgery using flexor carpi ulnaris versus flexor carpi radialis in patients with radial nerve palsy

Radial nerve palsy (RNP) causes significant disability to patients, leaving them with the only option of invasive surgery. Tendon transfers are the most performed procedures. This study compared the functional and Metacarpophalangeal joint (MCPJ) extension outcomes of two techniques, flexor carpi ulnaris (FCU) and flexor carpi radialis (FCR) tendon transfer surgery. The grip strength, DASH scores, post-operative complication outcomes were also compared. Two forearms were dissected and a systematic review involving a comprehensive database search was conducted. Of 540 participants included, 328 received FCU and 212 FCR tendon transfers. Post-operative MCPI extension was 7.18% greater in the FCU than in the FCR group. The FCR group had a higher percentage of good functional outcomes compared to the FCU group (91% vs 73.7%). The FCU group had better results for post-operative DASH scores, while the FCR group had better results for grip strength. FCU transfers were seen to have a higher percentage of radial deviation deformity post-operatively (7.92% versus 1.88%). The FCR tendon transfer appears to be the most suitable transfer for RNP. FCU and FCR transfers show similar functional results. However, FCR transfers maintain a primary wrist stabiliser that maintains wrist strength and reduces the chances of radial deformity.

# II. Michael Weekes, Abdus Burahee, Christopher McGhee, Paul Malone, Dominic Power UHB NHS trust Hand Centre, HaPPeN research Team A cadaveric feasibility study for a triple nerve transfer technique to restore elbow flexion after upper brachial plexus injury

C5-6 brachial plexus injuries cause loss of active elbow flexion. Ulnar and median nerve transfers have restored function of biceps and brachialis, with superior double versus single fascicle transfer results (MRC grade 4 score 83% vs 63.3%; p=0.013). However, reinnervated elbow flexor fatigue remains a challenge. This study explores feasibility of transfer to biceps, brachialis and brachioradialis. Methods: From eight fresh frozen cadavers we identified key muscle motor points, donor nerve dissection and reinnervation distances using fascicle transfers. Median fascicle to biceps, ulnar nerve (UN) fascicle to brachialis and brachioradialis transfers were performed using an in-situ lateral cutaneous nerve of the forearm (LCNF) graft to the nerve to brachioradialis. Human Tissue Act (2004) compliant study. Results: Ulnar nerve to brachioradialis transfer using LCNF interposition graft was feasible in all limbs. Average median nerve dissection distance was 14.63 (95% CI: 12.4-16.9) and ulnar 17.5mm (95% CI: 13.9 – 21.0). Median nerve to biceps reinnervation distance was 17.3-26.4mm (95% CI:12.7-33.6), ulnar nerve to brachialis: 24.6-41.2mm (95%CI:5.1-53.1) and ulnar nerve coaptation distance to brachioradialis 76.6-104mm (95% CI:68.3-126.6). Conclusion: Nerve transfer reinnervation of the brachioradialis through an LCNF in-situ graft is feasible. This Oberlin modification could reduce elbow flexion fatigue.

# 12. Mannickal Thankappan, Sreeja Leo Rathinaraj Antony Soundararajan. Buckinghamshire New University, UK. Does core muscle weakness in patients with chronic low back pain alter selected pulmonary function parameters?

Spirometry evaluation states that the active contraction of the abdominal muscle and a stable spine are vital for optimal pulmonary function. Research shows that the core muscles are weak in CLBP Chronic Low back pain patients. Thus, we hypothesised that pulmonary function might be reduced in patients with CLBP. 108 CLBP patients [62 males] were recruited from MIMSR Medical College with a mean age of 40.3 [23-52] years, weight of 61.5 [52-81] kg and height of 157.7 [154-164] cms were selected. Demographic data were recorded and consent obtained. Forced Expiratory Volume in the first second [FEVI] and Peak Expiratory Flow Rate [PEFR] were measured by Spirometer. The correlation coefficient of FEVI with r=0.78 [P<0.01] and of PEFR with r=0.84 [P<0.01] shows a positive correlation between the patient value and the expected value. Statistical analysis between the patients and the expected value of FEVI and PEFR shows the †tâ€<sup>™</sup> value of 63.12 [P< 0.0001] and 51.38 [P< 0.0001] respectively. Thus, there is a statistically significant reduction in selected pulmonary parameters among the chronic LBP adult patients. Core muscle dysfunction, delayed recruitment of abdominal muscles along with the pain, and kinesiophobia associated with CLBP are the factors responsible for this pulmonary dysfunction.



# POSTERS

PI. Morrison Adam, Matthew Jaffray, David Chorn, Jaya Jayasinghe School of Medicine, Medical Sciences and Nutrition, University of Aberdeen, Aberdeen, UK Treatments involving the Lateral Pterygoid Muscle for the Reduction of Pain and Dysfunction Among Patients with Temporomandibular Joint Disorders

The lateral pterygoid muscle (LPM) is a key component in the functioning of the temporomandibular joint (TMJ) and is likely involved in the pathophysiology of temporomandibular disorders (TMD). This study investigated the muscle's potential as a target for therapeutic strategies to treat pain and TMI dysfunction in patients with intra-articular TMDs. Cadaveric dissections were performed using a lateral approach to identify and examine the LPM, and a systematic review was conducted to analyze randomized controlled trials (RCTs) isolating the LPM as a treatment for pain and TMJ dysfunction in patients with intra-articular TMDs. The systematic review highlighted three treatment methods (botulinum toxin injections, surgical treatment, and muscle training) targeting the LPM. Therapeutic strategies focusing on the LPM showed improvements in pain, clicking, limited jaw movement, and, to some extent, articular disc positioning. However, no significant differences were observed when compared to other treatments and placebo. A lack of literature in this area, combined with heterogeneity in interventions and outcome measures, prevents comprehensive comparison across studies. This underscores the need for standardized research protocols in TMD studies and the development of new evidence-based literature on the treatment of intraarticular TMDs.

BAA

**P2.** Manah Chandra Changmai<sup>1</sup> Amierul Bin Sharudin<sup>2.</sup>, Husni Ahmed Al-Goshae<sup>2.</sup> Hasan Aid <sup>3</sup> Mohammed Faez Baobaid <sup>4</sup> Abdulah Y. Al-Mahdi <sup>5</sup> Rajesh Mahfoud A.M. Abdulghan<sup>2</sup> Sakina Ruhi <sup>5 /</sup> Centre for Anatomy and Human Identification University of Dundee <sup>2.</sup> Department of Anatomy, International medical School Selangor, Malaysia, <sup>3</sup> Department of Radiology, International Medical School, Selangor, Malaysia <sup>4</sup> Department of Biochemistry, International Medical School, Selangor, Malaysia <sup>5</sup>Department of Biochemistry, International Medical School, Selangor, Malaysia The intervertebral foramen at the L4/L5 level and its relationship to age

The intervertebral foramen (IVF) is a region where nerve roots and mixed spinal nerves are particularly vulnerable to compression due to reduce width or height of the foramen. There is limited understanding of how the intervertebral foramen undergoes morphological changes at the L4/L5 region with aging. The study was an accessible lumbar MRI image-based retrospective cross-sectional examination of the lumbar spine. This study took place at the Imaging Department of the Management & Science Medical Centre (MSUMC) in Selangor, Malaysia. A purposive sampling method was employed for data collection and research tools to gather the samples. In evaluating intra-observer reliability for measurement WI, the Cronbach's Alpha values were 0.500 for the right IVF and 0.902 for the left IVF, suggesting moderate to high reliability. In the right IVF, the most prevalent shape in Cluster 2 is Pyriform, which appears 10 times (45.5%). The detailed morphology of the exit region of the intervertebral foramen is important where size and shape are often linked to nerve root compression. This research enhances our understanding of age-related anatomical variations in the lumbar region between genders and adds to the overall knowledge of spinal disorders.



# **P3.** Shahana Shahida ,Tasneem Baabbad Jack Miller Heather Morgan, School of Medicine, Medical Sciences and Nutrition ,University of Aberdeen A Nationwide Study to Analyse the Adaptation of Anatomy Teaching and Assessment Methods in the UK Universities Before and During the COVID-19 Pandemic

During the COVID-19 pandemic, we adapted rapidly to a challenging environment and demonstrated resilience in anatomy education. We aim to address the nationwide adaptation of anatomy courses before and during the COVID-19 pandemic to understand how teaching/assessment methods evolved, and assistance provided to students with special learning needs (SLNs). Data on anatomy teaching and assessment methods were collected from UK university catalogues (total N=47, UG=34, PG=13) and Freedom of Information (FOI) teams (58 universities=71 courses) with five closeended guestions, a checklist, and one open-ended guestion. Use of oncampus anatomy teaching methods reduced significantly (e.g., Learnercentered methods/ Constructivist Approach, Content-focused methods, Interactive/participative methods, Small-Group Instruction, Project-Based Learning, Flipped Classroom, Cooperative Learning, Problem-solving sessions etc.). Teacher-centered method usage also decreased (57% to 34%) during the pandemic. Lab work was the method that most decreased in use (45%), and most schools (98%) shifted their classes to online/ webinars during pandemic. Overall, all types of assessments were reduced during the pandemic. The UG anatomy courses primarily relied on exam-based assessments, and PG used research and writing-based projects. Some learning approaches from this pandemic have sustained and shaped future anatomy education, opening avenues for future research in sustainable anatomy teaching.

BACA

# **P4.** Shahana Shahida, Luke J Murphy, Ahmad Al Hanich, Martin Downing, Andre Van Niekerk George P Ashcroft School of Medicine, Medical Sciences and Nutrition, University of Aberdeen **A novel external fixation method and its impact on wrist distraction in relation to distal radial fracture**

Indirect reduction using external fixation is a commonly used treatment for distal radial fractures. This study aimed to test if the modified Aberdeen method is superior to the standard method by testing the ligament length changes and finding a safe pin-insertion point. Formalin-fixed cadaveric specimens (N=8) were dissected to optimise the application of the Aberdeen method (N=2). Tantalum markers were inserted into bone/ligaments near ligament endpoints. Radiosteriometric Analysis (RSA) was then used to measure the change of ligament length (before and after applying distraction). Average relative ligament change (RLC) was analysed (N=6) using GraphPad Prism. The Aberdeen method could be applied, damage-free, to all wrists (N=6) on the 4th metacarpal bone. The Dorsal Radiocarpal Ligament (DRL, average RLC, Aberdeen=0.048, Standard=0.030), the Radial Collateral (RC, average RLC, Aberdeen=0.112, Standard=0.105) Ligament, and the Ulnar Collateral (UC, average RLC, Aberdeen=0.079, Standard=0.068) Ligament were described and measured. Initial results of the Aberdeen method demonstrated increased ligament length compared to the Standard method. This data was not reproducible with a reverse order of frame application, which we believe is due to the limitation of formalinfixed cadaveric specimens. Our study demonstrates that the fourth metacarpal bone is a safe place to apply the Aberdeen frame.



# **P5.** Pattinson, Sean<sup>1</sup> Meenakshi Swamy<sup>2</sup> <sup>1</sup> Royal Victoria Infirmary, Newcastleupon-Tyne <sup>2</sup> School of Medicine, Newcastle University **An unusual origin of** the left coronary artery and a second left anterior descending coronary artery: a cadaveric study

Variations in coronary artery anatomy can delay treatment with life threatening complications. We encountered anatomical variations during thoracic dissection. One variant is that of the left coronary artery originating from the right coronary artery (RCA) instead of the aorta. It then courses posterior to the aorta and splits into the left anterior descending artery (LAD I) and left circumflex artery. The circumflex artery follows its usual path and passes along the left atrioventricular groove. The LAD I artery also follows its usual course, however joins a separate larger left anterior descending artery (LAD 2), which has a direct anomalous origin from the anterior aspect of the aorta, anterolateral to the RCA. This study would add to literature on variations of the coronary arteries. It would be clinically significant in atherosclerotic lesions at the origin or initial part of the right coronary artery. The increased area supplied by the RCA origin could have implications for ECG recognition of infarction territories. Failure to view a major trunk could be misinterpreted as absence or occlusion during PCI procedures and hence could have significant clinical implications. We thank the donor, and the work was conducted under HTA legislation.



# **P6.** Shahana Shahida , Rebekah Loy Olena Kit Thanassi Athanassopoulos School of Medicine, Medical Sciences and Nutrition, University of Aberdeen Smile Analysis: An Analysis of Surgical Techniques and Outcome Measurements in People with Fascial Palsy

The smile is an important social feature for humans. Losing this may lead to poorer social interaction in facial palsy patients. We aimed to analyse the most beneficial surgical technique for facial palsy patients and the best outcome measurement methods for measuring smile symmetry improvements. Two formalin-fixed cadaveric heads were dissected, identifying normal facial anatomy. A thigh was dissected, ascertaining the gracilis muscle. Two surgical techniques were mimicked on cadavers to highlight the procedures. A literature review was completed, comparing surgical techniques and analysing different outcome measurements. Techmed3D software was used to create 3D scans, and the angle of oral commissure was measured in six healthy volunteers. Facial dissections matched the normal anatomy reviewed in the literature. The literature review suggested that the most successful surgical approach was gracilis-free muscle transfer with masseteric innervation. Seven outcome measurement methods were identified, including the Glasgow Facial Palsy Scale. 3D scanning showed a decreased angle of commissure after smiling in all patients except one. The software has potential but needs more specificity to the head-neck region. Gracilis-free muscle transfer with masseteric innervation, combining the Sunnybrook Facial Grading System and Glasgow Facial Palsy Scale as an outcome measurement, could be the most beneficial approach.



# **P7.** Shahana Shahida, Niki Barda School of Medicine, Medical Sciences and Nutrition, University of Aberdeen Analysis of the efficacy of injectable versus transplanted Mesenchymal Stem Cell (MSC) therapy in Osteoarthritis

Osteoarthritis (OA) in the knee is a common and debilitating condition. While current treatments are limited to pain relief and, ultimately, a total knee replacement, research has shown that mesenchymal stem cells (MSCs) could be one of the new treatment approaches. The study aimed to compare the efficacy of injectable MSCs with implanted MSC therapy for the treatment of OA. A database search was completed using Cochrane, Pubmed and Ovid Medline. The inclusion criteria were randomised control trial. patients aged 18-80, clinically diagnosed Osteoarthritis, intra-articular injection of MSC therapy, intra-articular implantation of autologous bone marrow-derived mesenchymal stromal cells, clinical outcome and pain improvement. The research excluded patients under the age of 18 or over 80, undiagnosed osteoarthritis knee pain, dropout rate that exceeds 20%, hyaluronic acid and blood platelet injections, SIGN criteria were used for the data collection and analysis, and each paper was appraised independently. A total of four randomised control trial studies were selected for critical appraisal. There was an overall improvement in pain scores across all four papers. The results have shown a great potential for MSC therapy regarding pain relief in all studies. Further research is needed to overcome any study limitations.



# **P8.** Shahana Shahida, Tesia Jivanni Honeywell School of Medicine, Medical Sciences and Nutrition, University of Aberdeen **Analysing the Effect of Th2 Cy-tokine Interleukin-13 (IL-13) on Fibrosis**

As a leading cause of worldwide morbidity and mortality, fibrosis is a major problem arising from excessive extracellular matrix component deposition, resulting from dysregulated wound healing following infection or injury. There is currently no cure or efficient treatment targeting it. We lack a proper understanding of the mechanisms driving the fibrotic pathways. This study aimed to analyse a detailed understanding of the fibrotic pathway mediated by transforming growth factor beta-I (TGFB-I) and the T-helper 2 cytokine interleukin 13 (IL-13) and their impact on fibrosis by performing a literature review. We found that IL13 works via the IL13RA2 receptor to induce TGFB production in mice fibrotic lung model and intestinal colitis model. We also found that IL-13 impacted expression of ACE2 and TMPRS-S2 mediators for airway epithelial fibrosis in COVID-19. Whilst the exact mechanisms operating across cases of fibrosis in renal, pulmonary, arthrological and gastroenterological diseases were slightly different, TH2-cytokine TGFBI, and its downstream effector SMAD3 were critical to the outcome of fibrosis in most cases. TGFB1-shRNA and anti-IL-13 drugs were identified for showing promise in fibrosis reduction and were suggested as potential anti-fibrotic therapies for further investigation. If successful, these therapies could improve outcomes for affected patients and healthcare systems.



# **P9.** Seaton, David M.<sup>1</sup> Hannah Bridgwater <sup>2</sup> Rob Folkard <sup>3</sup> Cecilia Brassett <sup>4</sup> Neil Ashwood<sup>5</sup> <sup>1</sup>University of Leicester <sup>2</sup>Department of Trauma and Orthopaedics, East and North Hertfordshire NHS Trust <sup>3</sup>University of Cambridge <sup>4</sup>Human Anatomy Centre, University of Cambridge <sup>5</sup>University Hospitals of Derby and Burton, Wolverhampton University Research Institute Surgical Implications and Anatomical Variations of Nerve Structures at Risk in Surgical Approaches to the Elbow: A Systematic Review

Surgical approaches to the elbow are complicated by the proximity of nerves to the incisions, presenting a notable risk of iatrogenic injury. We conducted a systematic review to identify nerves at risk, and whether "safe zones exist to avoid such injury. Eligible articles assessed the anatomy of nerves at the elbow. Databases were searched and 375 articles were identified, with 40 studies subsequently included. In lateral approaches, multiple authors identified that flexion increased the distance to bony landmarks, reducing the radial nerve injury risk. With the posterior interosseous branch, authors identified the Kocher approach was safest, compared to Kaplan and extensor digitorum communis splitting, whilst a pronated elbow also reduced the injury risk. In posterior approaches, a direct olecranon incision was identified to be safest to minimise the risk of encountering the anconeous branches. Medially, elbow flexion and neutral forearm position increased the safety margins to the median nerve. Extreme caution must be taken when working near the medial epicondyle as the ulnar nerve and its branches can be within 18 mm. We have identified that common approaches to the elbow risk injury to nerves, and several modifications have been suggested which could reduce the iatrogenic injury risk in patients.

BAA

# **P10.** Taylor. E, .V, Karavadra. K, Rao. A Dekker, N Ashwood. University Hospitals Derby and Burton NHS Trust Ulnar Nerve Compression by Accessory Muscle: A Case Report

The ulnar nerve runs through the cubital tunnel at the elbow, its compression is a common type of entrapment neuropathy with numerous etiologies. One rarer cause to consider is the presence of an accessory muscle - the anconeus epitrochlearis, which attaches from the humerus medial epicondyle to the olecranon, covering the posterior aspect of the cubital tunnel. This anatomical variance is typically asymptomatic, and while not uncommon in itself, it is rarely found to be the cause of compression of the ulnar nerve, with its prevalence remaining largely unknown. We present the case of a 56year-old female with unilateral weakened grip and paraesthesia of the fourth and fifth fingers. Nerve conduction studies confirmed ulnar nerve dysfunction. During cubital tunnel decompression and ulnar shortening osteotomy, ulnar nerve compression by the anconeus epitrochlearis was identified, and the accessory muscle was subsequently excised. This report underscores the importance of considering anatomical variations, such as accessory muscles, in patients presenting with ulnar neuropathy. Awareness of this unusual cause is vital for accurate diagnosis and treatment, impacting both therapeutic approach and patient outcome.



**PII.** Sethunath, Abhinav Nair <sup>13</sup> Swathi Appathurai <sup>1</sup>, Samuel Dwamena<sup>1</sup>, Hamna Sahi<sup>2</sup>, Viktorija Petraitiene<sup>2</sup>, Kavitha Saw<sup>1</sup> <sup>1</sup> Swansea Bay University Health Board <sup>2</sup> Betsi Cadwaladr University Health Board <sup>3</sup> University of Aberdeen **Head and Neck Skin Cancer Surgery: Does the Surgical Site Influence Postoperative Pain Intensity?** 

Background: The perception of postoperative pain in facial skin cancer surgery is influenced by sensory nerve fibres namely A-delta and C-fiber distribution, with A-delta fibers transmitting sharp, localised pain and C-fibers conveying slower, aching sensations. Objective: This study examines the relationship between postoperative pain levels and skin cancer excision from various sites in the head and neck region. Methods: Data from 158 patients at two hospitals in Wales were analysed. Each patient rated pain on a 1-10 scale for seven days. All lesions measured under 2 cm. Results: The highest average pain scores were noted in the chest (3.29), followed by neck (2.48), ear (1.93), and eye (1.71), with lower scores on the cheek, lip, and shoulder (1.00 $\hat{a}$ €"1.23). The average cohort pain score was 1.75 (1.65 for males, 2.02 for females). ANOVA analysis (p-value = 0.86) indicated no significant pain difference by lesion location. Conclusion: For lesions under 2 cm, pain levels were not significantly affected by location. This allows appropriate planning of post-operative analgesia.



**P12.** Dall Ruaridh <sup>1</sup> Daisy Abbott<sup>2</sup> Paul Rea <sup>3</sup>, Ourania Varsou <sup>3</sup> <sup>1</sup> Institute of Dentistry, University of Aberdeen <sup>2</sup>School of Innovation and Technology, Glasgow School of Art <sup>3</sup> School of Life Sciences, University of Glasgow. Intrinsic Rewards to Increase Motivation to Use a Game-Based Learning App on Skull Anatomy

Introduction: Understanding of skull anatomy is required to practice clinical dentistry. There is little evidence for the use of serious games in dental education despite their successes in other healthcare areas. A game mechanic that can increase user motivation is intrinsically integrated rewards. Method: A serious game was developed to test the potential of intrinsically integrated rewards to increase skull anatomy knowledge in a convenience sample of users (n=6). Ethical approval was granted by the Glasgow School of Art. Participants were allocated to play a game version with or without a reward system. Participants undertook pre- and post-test MCQs on skull anatomy. Data were also gathered on user experience after participants played the alternate version of the game. Results: Knowledge gain from a game with rewards is higher. Including rewards increased feelings of competence when playing, reduced tension, increased desire to replay the game and were preferred over no rewards. However, there was less flow and immersion for those who played the reward version. Conclusion: Intrinsically integrated rewards are a game mechanic that could motivate users to engage with serious games and may help with skull anatomy knowledge gain. Addendum: The app will be available for attendees to try.



# **P13.** Saw, Shiveena Darren Owakee <sup>1</sup>Millfield School <sup>2</sup> Director Parkway Dental Clinic Swansea "Sweet Misconceptions: Evaluating Teenagers' Awareness of Recommended Daily Sugar Intake"

Background Public Health England advises that teenagers aged 11-17 should limit sugar intake to 30g daily. However, teenagers consume about three times this amount, largely from sugary drinks. Aim This study assesses sugar intake among secondary school students and their knowledge of recommended guidelines. Materials and methods Students in Wales (ages 11-16) completed questionnaires covering sugary drink consumption frequency, presence of dental fillings, and knowledge of recommended sugar content guidelines. Results Of the 169 questionnaires, 101 were completed. Findings showed that 70.4% underestimated sugar content in popular drinks (e.g., 93.1% for Innocent Smoothie, 89.1% for Ribena, 83.2% for Frijj). Additionally, 98% consumed a sugary drink at least weekly, 55% had at least one filling, and 83.1% were unaware of recommended sugar limits. Conclusions Empowering adolescents with skills to understand sugar content is crucial. Collaboration among parents, schools, and communities is vital to raise awareness, especially as NHS England reports dental issues as the top reason for teenage hospital admissions. This study underscores the need for better education on daily sugar intake. We were able to educate the teenagers at our school on improved habits based on the results.



# P14. Mannickal Thankappan, Sreeja Leo Rathinaraj Antony Soundararajan School of Health and Social Care Professions, Buckinghamshire New University Objective Structured Clinical Examination (OSCE) framework in Applied Anatomy module of Physiotherapy students.

OSCE is a flexible evaluative tool that can be used to evaluate competency by observing directly and using objective testing in a clinical set-up. The study aims to evaluate the efficacy of OSCE in assessing transferable skills. 28 M.Sc. (pre-registration) physiotherapy students were examined in 3 OSCE stations for their summative exam for a total duration of 30 minutes (10 minutes for each station. Station 1: Anatomy station which has 2 substations: bones (upper-limb, lower-limb, and spine) and joints. Station 2 has palpation and subjective examination. Station 3: Objective examination based on the case scenario. Each station was rolled for 10 minutes each. Students with reasonable adjustments were given 25% extra reading time as per the recommendations of the Disability and Inclusive Team. Overall, OSCE has a good rate of success throughout the module. The overall module results (100%) met the school's benchmark of 80% pass on the first attempt. Further analysis showed that 2 students (7%) failed in the palpation station (S2). OSCE has a positive relationship with the clinical performance of healthcare professional students. Students enrolled in health profession education programs must acquire and demonstrate competence in a variety of practice areas.





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