



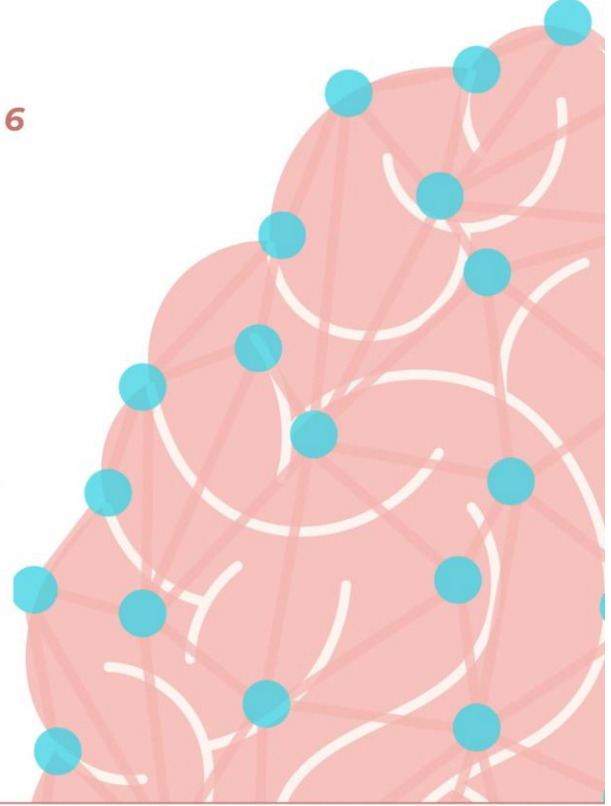
6<sup>TH</sup> EASTERN MEDITERRANEAN INTERNATIONAL  
MEDICAL STUDENTS' CONGRESS



6<sup>TH</sup> EMIMSC 2026

# BRAIN CONNECT

STUDENTS & EXPERTS  
IN NEUROSCIENCE



## ABSTRACT BOOK

11-12 MAY 2026

RAUF RAIF DENKTAŞ CONGRESS  
AND CULTURE CENTER  
FAMAGUSTA, CYPRUS

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Eastern Mediterranean University  
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# EASTERN MEDITERRANEAN INTERNATIONAL MEDICAL STUDENTS CONGRESS

**Abstract Book**  
**11-12 May 2026**

**Eastern Mediterranean University**  
**Faculty of Medicine**  
**Famagusta, North Cyprus**

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# ORAL PRESENTATIONS

Study Code	Title of Study	Page
OP-01	Medical Students' Perceptions of Integrating Climate Change and Health Into the Medical Curriculum	1
OP-02	Invisible Guests Beneath the Skin: Scabies	2
OP-03	Knowledge and Attitudes of EMU Medicine Students About HPV Disease and HPV Vaccination	3
OP-04	Knowledge and Attitudes Toward Abortion Among Law, Medicine, Nursing, and Psychology Students: A Cross-Sectional Study	4
OP-05	The Role of Interleukin-10 in Tissue Repair as Neural Recovery	5
OP-06	Evaluation of The Cytotoxic Effects of Thymoquinone and Cyclophosphamide On Human Colorectal Cancer Cells	6
OP-07	In Silico Analysis of GBA1 Missense Mutations: Gaucher's Disease and Beyond	7
OP-08	Integrative Bioinformatic Identification of An Endocrine–metabolic–inflammatory molecular network in polycystic ovary syndrome	8
OP-09	Prevalence of obsessive-compulsive symptoms among medical students	9
OP-10	Assessment of cardiovascular disease risk factor knowledge and health-related practices among residents of Famagusta, Northern Cyprus	10
OP-11	Comparison of tobacco-induced biomarker and immune-associated biomarker to explore their potential prognostic value in head and neck squamous carcinoma	11
OP-12	Clinical–biological mismatch in Alzheimer disease: implications for biomarker discovery in early diagnosis	12
OP-13	Implementation challenges of HIV PrEP and DoxyPEP in low- and middle-income settings	13
OP-14	Knowledge and Attitudes Towards Sexually Transmitted Diseases among Undergraduate Students at EMU	14
OP-15	Epidemiology of Developmental Dysplasia of the Hip in TRNC: the First Retrospective Hospital-Based Incidence Study and Comparison with Regional and Turkish Data	15
OP-16	Recurrent Caustic Ingestion in Treatment-Resistant Paranoid Schizophrenia Complicated by Catheter-Related Internal Jugular Vein Thrombosis and Methicillin-Resistant Staphylococcus Epidermidis Bacteraemia: A Case Report	16

# POSTER PRESENTATIONS

Study Code	Title of Study	Page
PP-01	Brainrot: The Digital Dilemma from Neurological Perspective	17
PP-02	Personalized Nanomedicine in Alzheimer’s Disease: Pharmacogenomic Meets Nanotechnology	18
PP-03	Evaluation of Eastern Mediterranean University Faculty of Medicine Clinical Application and Research Center Cognitive Screening Program Results	19
PP-04	Evaluation of Gastroenteritis Severity in Children Under Five in Relation to Caregiver Practices and Early-Life Microbiota-Associated Factors	20
PP-05	Comperative Cytotoxicity of Carbon and Quercetin in MCF-7 Breast Cancer Cells	21
PP-06	Topical Mummy Substance Accelerates Cutaneous Repair and Tissue Organization: Evidence Fron an In Vivo Model	22
PP-07	Breath Regulation and Foreign Language Anxiety: A Pilot Neurocognitive Intervention for Engancing L2 Speaking Confidence Among University EFL Learners	23
PP-08	Development and Validation of a Scale to Evaluate AI-Integrated Anatomy Learning Among Medical Students	24
PP-09	Perceived Competence of Pre-Clinical Phase Medical Students in Performing First Aid and Skills After Training	25
PP-10	Laboratory Safety Awareness and Knowledge of Medical Students	26
PP-11	Sufficiency of Theoretical Microbiology and Histology Courses on Laboratory for Medical Students	27
PP-12	Participation in Social and Extracurricular Activities and Mental Health of Medical Students: A Cross-Sectional Study at Eastern Mediterranean University	28
PP-13	Medical Students’ Use and Acceptance of AI Chatbots In Medical Education	29
PP-14	Earthquake-Related Anxiety, Awareness and Preparedness Among EMU Medical Students	30
PP-15	Sleep Quality as A Determinant of Physical Health Related Quality of Life	31
PP-16	Relationship Between Perceived Stress and Physical Activity Among Medical Students	32

<b>Study Code</b>	<b>Title of Study</b>	<b>Page</b>
<b>PP-17</b>	Evaluation of Awareness, Attitudes, and Behaviours Regarding Prenatal Tests Among Pregnant Women: A Cross-Sectional Study in Famagusta, Northern Cyprus	33
<b>PP-18</b>	Knowledge and Attitudes of EMU Medical Students Towards Spinal Muscular Atrophy (SMA)	34
<b>PP-19</b>	Vaccination Attitudes, Perceived Knowledge, and Vaccine Hesitancy Among EMU Medical Students	35
<b>PP-20</b>	HPV Knowledge, Vaccination Status and Attitudes Toward HPV Vaccination Among University Students	36
<b>PP-21</b>	Knowledge of Proper Antibiotics Use and Its Association with Antibiotics Use Behaviour Across Different Faculties in the Cyprus International University	37
<b>PP-22</b>	Evaluating Knowledge and Attitudes Toward Antiotic Resistance: A Cross-Sectional Study at Eastern Mediterranean University	38
<b>PP-23</b>	Monster Under the Sheets: Knowledge Gaps and Misconceptions About Bed Bugs Among University Students	39
<b>PP-24</b>	Knowledge, Attitudes and Practices Regarding Head Lice Among CIU Students	40

ABSTRACTS  
FOR  
ORAL PRESENTATIONS

**STUDY CODE: OP-01**

## **MEDICAL STUDENTS' PERCEPTIONS OF INTEGRATING CLIMATE CHANGE AND HEALTH INTO THE MEDICAL CURRICULUM**

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### **Introduction:**

Climate change is increasingly recognized as a critical determinant of human health, yet its integration into medical curricula remains inadequate globally. This study aimed to evaluate the perceptions, attitudes, and self-reported knowledge of medical students regarding the inclusion of climate change and health topics in the medical curriculum at Eastern Mediterranean University (EMU).

### **Methods:**

A descriptive, cross-sectional survey was conducted among first-, second-, and third-year medical students at EMU Faculty of Medicine during the 2025–2026 academic year. A structured, self-administered questionnaire comprising 23 items across three sections was distributed to 142 students; 125 responded (response rate: 88.0%). Demographic data, perceptions, attitudes, and knowledge were assessed through Likert-scale items and multiple-choice questions. Data were analyzed descriptively using IBM SPSS Statistics.

### **Results:**

The mean age of participants was 19.62 years (SD = 1.39), and 61.6% were female. Among respondents, 87.2% agreed that climate change directly affects human health, and 79.0% agreed it has significant health effects. However, 57.6% reported their instructors had never addressed climate-health topics, and 70.0% felt their school provides insufficient education on the subject. Only 13.6% had attended the climate change elective course. The most affected health domains identified were nutrition/food security (56.8%), waterborne diseases (56.0%), and respiratory diseases (53.6%). Regarding curriculum integration, 53.2% preferred climate change content to be incorporated into existing courses, and 56.8% favored inclusion during preclinical years.

### **Conclusion(s):**

Medical students at EMU demonstrate awareness of climate change as a health issue but report significant gaps in formal education. There is a strong demand for structured curricular integration, particularly during preclinical training. These findings support the urgent need to incorporate climate change and health education into undergraduate medical programs.

**Keywords:** climate change, medical education, medical students

**STUDY CODE: OP-02**

## **INVISIBLE GUESTS BENEATH THE SKIN: SCABIES**

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### **Introduction:**

Scabies is a highly contagious parasitic skin disease caused by *Sarcoptes scabiei*. Its transmitted through skin-to-skin contact and facilitated in overcrowded and communal living environments (dormitories, nursing homes, schools and refugee camps). Scabies is characterized by intense itching, skin lesions, sleep disturbances. Our study aims to determine the prevalence and knowledge of scabies among the students of Cyprus International University.

### **Methods:**

The study included 113 CIU students. We collected our data using a structural, self-administered questionnaire developed based on existence literature and the KAA (knowledge, attitude and awareness) framework. This study was conducted as independent samples t-test and one-way anova (non-parametric).

### **Results:**

Due to our independent samples t-test data which has come from our questionnaire results it is proved no statistically significant difference between male and female students regarding scabies diagnosis,  $t(111) = -2.33$ ,  $p = 0.989$ .

5.3% of participants (6 people) claim that they have been diagnosed with Scabies while 25 people determined the time of their disease occurrence which is showing a stigma in this society.

According to our demographic data even though 74.3% of the participants claim that personal hygiene is the most effective method for preventing Scabies there is still noticeable percentage (22.1%) wash their bed sheets monthly. Due to our demographic data 40.7% of the participants stated that they have good and 37.2% poor rate of knowledge about Scabies and they gained this information from mainly school/university (37.8%), friends/family (33.7%) and social media (25.5%).

### **Conclusion:**

In summary, Scabies prevalence among students is low, with no significant difference between genders. However, despite moderate awareness, gaps in hygiene practices and signs of stigma still exist, highlighting the need for better health education and awareness programs.

**Keywords:** scabies, prevalence, knowledge

**STUDY CODE: OP-03****KNOWLEDGE AND ATTITUDES OF EMU MEDICINE STUDENTS ABOUT HPV DISEASE AND HPV VACCINATION**

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**Background:**

Human papillomavirus (HPV) is a significant public health concern worldwide, and adequate knowledge. Positive attitudes towards HPV prevention are essential among medical students, as they are future healthcare professionals. This study aimed to assess EMU medical students' knowledge and attitudes regarding HPV and HPV vaccination, to evaluate vaccination uptake, and examine the differences by gender and year of study.

**Methods:**

A cross-sectional quantitative study was conducted among 121 Eastern Mediterranean University Faculty of Medicine students. Data were collected using a structured questionnaire including demographic information, HPV knowledge questions, questions related to vaccination, and Likert-scale attitude statements. Descriptive statistics were used to summarize participant characteristics and response patterns. The differences between groups were examined using chi-square, Mann-Whitney U, and Kruskal-Wallis tests, with significance set at  $p < .05$ .

**Results:**

Participants demonstrated moderate overall HPV knowledge (mean score=5.00/8) and generally positive attitudes toward HPV vaccination. Although significant gaps were found on vaccine dosage, recommended vaccination age, and natural HPV clearance, knowledge of HPV transmission and vaccine efficacy was generally strong. HPV vaccine uptake was low, with fewer than one-third of participants reporting vaccination. Significant gender differences were found in knowledge ( $p=.006$ ), attitudes ( $p=.028$ ), and vaccination uptake ( $p=.014$ ), with female students showing higher knowledge, more positive attitudes, and higher vaccination rates. Knowledge scores also differed significantly by year of study ( $p=.004$ ), while attitudes and vaccination uptake did not vary significantly across academic years.

**Conclusion:**

Despite moderate understanding and good attitudes, low vaccination uptake and ongoing knowledge gaps point to the need for more effective curricular programs and greater HPV vaccine awareness in medical school.

**Keywords:** HPV, vaccination, medical students

**STUDY CODE: OP-04**

**KNOWLEDGE AND ATTITUDES TOWARD ABORTION AMONG LAW, MEDICINE, NURSING, AND PSYCHOLOGY STUDENTS: A CROSS-SECTIONAL STUDY**

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**Introduction:**

Abortion is a complex issue shaped by medical, legal, and sociocultural factors. This study aimed to evaluate knowledge and attitudes toward abortion among students from law, medicine, nursing, and psychology, and to examine how these perspectives vary across disciplines and key sociodemographic characteristics, including gender, religiosity, and parental education.

**Material and Methods:**

A cross-sectional study was conducted among 200 final-year students (50 from each discipline) using equalized stratified random sampling method. Data were collected through a researcher-developed bilingual questionnaire assessing demographic characteristics, knowledge, and attitudes. Composite knowledge and attitude scores were calculated, and acceptable internal consistency of the attitude scale was confirmed by Cronbach's alpha coefficient ( $\alpha = 0.787$ ). Statistical analyses included Chi-square, Mann-Whitney U, Kruskal-Wallis, and Spearman correlation tests.

**Results:**

Most participants were familiar with the concept of abortion (97.5%); however, knowledge of legal aspects was more limited, with 69.7% correctly identifying its legal status and 52.8% of the legal timeframe. The mean knowledge score was  $6.00 \pm 1.66$  (out of 8) and significantly differed across disciplines ( $p = 0.009$ ), with lower scores among psychology students. No significant gender difference was observed in knowledge scores. Attitudes were generally supportive, with 84.7% supporting legalization and 89.3% recognizing that restrictive laws may lead to unsafe abortion practices. The mean attitude score was  $27.73 \pm 5.14$  (out of 35) and was significantly higher among female participants ( $p < 0.001$ ). Attitudes also differed across disciplines ( $p < 0.001$ ), with nursing students demonstrating less supportive views. Higher religiosity was associated with lower attitude scores, whereas higher parental education was associated with more supportive attitudes. In addition to group-based comparisons, the relationship between knowledge and attitude scores was examined. A weak but statistically significant positive correlation was observed between knowledge scores and attitude scores (Spearman's  $\rho = 0.174$ ,  $p = 0.015$ ).

**Conclusion:**

Although students demonstrate high overall awareness of abortion, deficiencies in legal knowledge persist. Variations in attitudes across disciplines and sociodemographic groups underscore the influence of educational background and personal beliefs. These findings highlight the importance of integrated, multidisciplinary education addressing the medical, legal, and ethical dimensions of abortion.

**Keywords:** abortion, knowledge, attitudes

**STUDY CODE: OP-05**

## **THE ROLE OF INTERLEUKIN-10 IN TISSUE REPAIR AS NEURAL RECOVERY**

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### **Introduction:**

Wound healing is a complex biological process regulated by the coordinated interaction of cellular responses, tissue remodeling, and inflammatory mediators, particularly cytokines. Interleukins, especially IL-6 and IL-10, play a crucial role in balancing inflammation and tissue repair. Disruption of these mechanisms can lead to delayed healing. Due to their bioactive properties and multi-target actions of natural compounds, they have gained interest as potential therapeutic agents. This study investigates Mummy and its effects on IL-6 and IL-10 across different phases of wound healing in an in vivo model.

### **Material and Methods:**

Mummy was purchased from Iran's market. Crushed and incorporated into a gel at a final concentration of 1 mg/g. Male C57 mice (50 days old, ~25 g) were housed under controlled conditions and maintained according to NIH guidelines. About 1 cm<sup>2</sup> of skin was created under anesthesia, followed by analgesic administration. Animals were divided into four groups and treated daily. Skin samples collected on days 3 and 12 were analyzed for TNF- $\alpha$ , IL-6, and IL-10 expression using ELISA.

### **Result:**

ELISA analysis revealed that in the acute phase (day 3), TNF- $\alpha$  levels were significantly elevated in the control group, whereas mummy ointment reduced TNF- $\alpha$  compared to control, less effectively than Cicaplast®, which demonstrated a significant reduction. In the repair phase, TNF- $\alpha$  levels were higher in the mummy-treated group than in controls. IL-6 levels were increased in the mummy group during both phases. Conversely, IL-10 levels were generally lower in treated groups; however, they were relatively higher in the mummy-treated group compared to control and anionic gel groups during the repair phase.

### **Conclusion:**

Mummy, through influencing inflammatory cytokines, demonstrated a modulatory impact on wound healing. Besides a reduction in TNF- $\alpha$  during the acute phase, it promoted a relative increase in IL-10 during repair, suggesting a shift toward anti-inflammatory activity.

**Keywords:** wound healing, Interleukins, anti-inflammatory.

**STUDY CODE: OP-06**

## **EVALUATION OF THE CYTOTOXIC EFFECTS OF THYMOQUINONE AND CYCLOPHOSPHAMIDE ON HUMAN COLORECTAL CANCER CELLS**

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### **Introduction:**

Colorectal cancer (CRC) remains one of the leading causes of cancer-related mortality worldwide, highlighting the need for more effective and less toxic therapies. Cyclophosphamide (CPA), a widely used alkylating agent, induces cytotoxicity through DNA cross-linking but is associated with significant adverse effects and resistance. Natural compounds such as thymoquinone (TQ), the bioactive component of *Nigella sativa*, have gained attention for their anticancer, anti-inflammatory, and pro-apoptotic properties. However, their efficacy as single agents and in combination therapies requires further investigation. This study evaluates whether CPA and TQ act synergistically to reduce the viability of human colorectal cancer cells, comparing their individual and combined cytotoxic effects.

### **Materials and Methods:**

Human colorectal cancer (HCT116) cells were treated with increasing concentrations of CPA and TQ for 24 hours. Cell viability was assessed using dose–effect analysis.  $IC_{50}$  values and dose–response relationships were calculated using CompuSyn software based on the Chou–Talalay method.

### **Results:**

TQ showed a strong dose-dependent cytotoxic effect, with increased inhibition of cell viability at higher concentrations. The  $IC_{50}$  (Dm) value for TQ was 38.02  $\mu$ M, with a strong correlation coefficient ( $r = 0.99$ ). In contrast, CPA demonstrated weaker cytotoxicity, with a higher  $IC_{50}$  of 182.83  $\mu$ M and a moderate correlation ( $r = 0.88$ ), indicating lower potency as a single agent.

### **Conclusion:**

TQ exhibits greater cytotoxic efficacy than CPA in HCT116 cells. While CPA shows limited potency in vitro, TQ demonstrates strong anticancer activity and may be a promising candidate for combination therapy.

**Keywords:** Colorectal cancer, Cyclophosphamide, Thymoquinone.

**STUDY CODE: OP-07**

## **IN SILICO ANALYSIS OF GBA1 MISSENSE MUTATIONS: GAUCHER'S DISEASE AND BEYOND**

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### **Introduction:**

Mutations in the GBA1 gene, encoding lysosomal glucocerebrosidase (GCase), cause Gaucher's disease and constitute the strongest genetic risk factor for Parkinson's disease. Despite extensive variant cataloging, the mechanistic basis of pathogenicity, spanning structural destabilization and disrupted protein interaction networks, remains incompletely resolved. This study employs an integrated in silico framework to systematically dissect the molecular consequences of disease-associated GBA1 missense mutations.

### **Methods:**

Sixteen GBA1 missense variants were analyzed using complementary predictive tools: PolyPhen-2 for evolutionary constraint and Missense3D version 2 for structural perturbation. Structural analyses were performed based on the available crystal structure of GCase. Variants were stratified according to established PolyPhen-2 thresholds. To extend beyond intrinsic structural effects, a STRING-derived GCase protein-protein interaction network was interrogated to evaluate how mutations, particularly at surface residues, may disrupt functional associations.

### **Results:**

A substantial proportion of variants were predicted to be deleterious by PolyPhen-2, reflecting strong evolutionary constraints. Structural analysis identified multiple destabilizing mechanisms, including disallowed backbone conformations, disruption of buried electrostatic interactions, and introduction of structurally unfavorable residues. The R120W variant emerged as a critical hotspot, violating four independent structural criteria (cavity alteration, buried charge replacement, hydrogen bond disruption, and salt bridge loss), indicating profound destabilization. Notably, discordant cases (e.g. N370S) suggest that pathogenicity may arise independently of overt structural damage. Network analysis revealed high-confidence interactions with key lysosomal and sphingolipid metabolism partners, supporting a model in which certain mutations contribute to disease by perturbing protein-protein interactions rather than catalytic structure alone.

### **Conclusion:**

This study highlights mechanistic heterogeneity in GBA1-associated disease, demonstrating that missense mutations exert pathogenic effects through both structural collapse and network-level disruption. Integrating evolutionary, structural, and interactome analyses provides a more comprehensive framework for variant interpretation, with implications for risk stratification and precision medicine in Gaucher's disease and related synucleinopathies.

**Keywords:** GBA1, Gaucher's disease, missense mutations.

**STUDY CODE: OP-08**

**INTEGRATIVE BIOINFORMATIC IDENTIFICATION OF AN ENDOCRINE–METABOLIC–INFLAMMATORY MOLECULAR NETWORK IN POLYCYSTIC OVARY SYNDROME**

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**Introduction:**

Polycystic ovary syndrome (pcos) is a heterogeneous endocrine disorder associated with hyperandrogenism, ovulatory dysfunction, insulin resistance, and chronic low-grade inflammation. Although numerous transcriptomic studies have described altered gene expression in pcos-related ovarian tissues, these findings are often fragmented and difficult to interpret collectively. This study aimed to integrate independent public transcriptomic datasets and determine whether a common molecular interaction framework could be identified.

**Material and Methods:**

Eight gene expression omnibus (geo) datasets obtained from granulosa cells, cumulus cells, human oocytes, and theca interna cells were comparatively analyzed using geo2r. Differentially expressed genes were selected according to statistical significance, consistent fold-change patterns, and biological relevance. A final candidate panel of 20 genes was generated. Protein–protein interaction analysis was performed using string, while interactome expansion and topological centrality analysis were conducted using pina. Structural interaction support was evaluated through interactome3d, and functional enrichment was analyzed using the panther and reactome databases.

**Results:**

The selected genes predominantly clustered within steroidogenic regulation, gonadotropin signaling, insulin-responsive pathways, inflammatory cytokine activity, and extracellular matrix remodeling. String analysis demonstrated highly significant protein interaction enrichment ( $p < 0.05$ ), indicating that the genes did not behave as isolated transcriptomic findings. Expanded interactome analysis identified several genes including *nfkb1*, *ar* and *tnf* as recurrent central network regulators. Functional enrichment further confirmed strong associations with ovarian steroidogenesis, insulin resistance, *tgf- $\beta$ /bmp* signaling pathways, and gonadal developmental pathways.

**Conclusion:**

Independent ovarian transcriptomic abnormalities in pcos converge into a biologically coherent endocrine–metabolic–inflammatory molecular network. These findings support the concept that pcos ovarian dysfunction may arise from coordinated, systems-level signaling disturbances rather than isolated gene defects.

**Keywords:** Pcos, bioinformatics, molecular network.

**STUDY CODE: OP-09**

## **PREVALANCE OF OBSESSIVE-COMPULSIVE SYMPTOMS AMONG MEDICAL STUDENTS**

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### **Introduction:**

Obsessive-Compulsive Disorder (OCD) is a neuropsychiatric disorder which has impacts on daily functioning. Medical students may be particularly vulnerable to obsessive-compulsive symptoms (OCS) due to frequent exposure to high stress and overstimulating settings. This study aims to assess the characteristics and level of OCS among undergraduate Phase 1 medical students at Eastern Mediterranean University (EMU), Faculty of Medicine.

### **Material and Methods:**

A cross-sectional study was conducted during the 2025-2026 academic year. Of 206 eligible students, 106 were selected using simple random sampling. Informed consent was obtained, and responses were collected anonymously. The Obsessive-Compulsive Inventory-Revised (OCI-R; Foa et al., 2002) was administered to evaluate OCS across six dimensions with a screening cutoff of  $\geq 21$ . Data were analyzed using SPSS and  $p < 0.05$  was considered statistically significant.

### **Results:**

The sample ( $n = 106$ ) had a mean age of  $20.13 \pm 2$  years; 51.89% were female, 44.34% were male and 3.77% preferred not to answer. The mean OCI-R total score was  $32.41 \pm 11.59$ , exceeding the clinical screening threshold. OCS were present in 86.79% of participants. The highest subscale scores were observed for ordering ( $6.06 \pm 2.96$ ), hoarding ( $5.73 \pm 2.52$ ), and obsessing ( $5.63 \pm 2.80$ ). No statistically significant differences were found by gender ( $p = 0.827$ ), academic year ( $p = 0.466$ ), age ( $p = 0.847$ ), living situation ( $p = 0.700$ ), or diagnosed condition ( $p = 0.988$ ).

### **Conclusion:**

A high screening-based prevalence of OCS (86.79%) was observed among Phase-1 EMU medical students, with symptom burden broadly distributed across all demographic subgroups. Ordering, hoarding, and obsessing were the dominant symptom dimensions, suggesting OCS in this population extends beyond contamination or cleaning-related symptoms. This study was not designed to establish clinical diagnoses; the OCI-R was used solely as a screening tool to identify OCS levels among students. These findings highlight the importance of universal mental health awareness and screening efforts in medical student populations.

**Keywords:** Obsessive-compulsive symptoms, medical students

**STUDY CODE: OP-10****ASSESSMENT OF CARDIOVASCULAR DISEASE RISK FACTOR KNOWLEDGE AND HEALTH-RELATED PRACTICES AMONG RESIDENTS OF FAMAGUSTA, NORTHERN CYPRUS**

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**Introduction / Background:**

Cardiovascular diseases (CVDs) remain the leading cause of mortality worldwide and represent a major public health concern in Northern Cyprus. Despite this high burden, there is limited data on public awareness of cardiovascular risk factors at the community level. Understanding both knowledge and everyday health behaviors is essential for developing effective prevention strategies.

**Methods:**

This cross-sectional study was conducted during the 2025–2026 academic year and included 420 adult residents of Famagusta. Data were collected through face-to-face household interviews using the validated Cardiovascular Disease Risk Factors Knowledge Level (CARRF-KL) Scale, along with a structured questionnaire assessing sociodemographic characteristics and lifestyle behaviors such as smoking, physical activity, and dietary habits. Statistical analyses were performed using SPSS.

**Results:**

Participants demonstrated a moderate level of knowledge regarding cardiovascular risk factors. However, unhealthy lifestyle behaviors were frequently observed. A considerable proportion of participants reported smoking and insufficient physical activity. In addition, dietary habits were not optimal, with frequent consumption of fast food and low intake of fruits and vegetables. These findings suggest that although individuals may have a basic understanding of cardiovascular risk factors, this awareness does not consistently translate into healthier daily behaviors.

**Conclusion:**

Although awareness of cardiovascular risk factors appears to be moderate among residents of Famagusta, the high prevalence of modifiable risk behaviors remains a concern. These results highlight the need for targeted public health interventions that not only improve knowledge but also promote sustainable behavioral changes. Community-based education and prevention programs may play a key role in reducing the burden of cardiovascular diseases in the region.

**Keywords:** CARRF-KL; cardiovascular risk factors; Famagusta.

**STUDY CODE: OP-11**

**COMPARISON OF TOBACCO INDUCED BIOMARKER AND IMMUNE-ASSOCIATED BIOMARKER TO EXPLORE THEIR POTENTIAL PROGNOSTIC VALUE IN HEAD AND NECK SQUAMOUS CARCINOMA**

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**Introduction:**

Prognostic biomarkers are a growing field in oncology, Head and neck squamous cell carcinoma being one of the most common cancers worldwide, it is heavily associated with smoking, therefore a study was conducted to evaluate the prognostic value of AHRR being one of the genes heavily influenced by tobacco use. CD8A was also studied due to its importance in Cancer Immunology and its growing prognostic value.

**Methods:**

This study was designed as a retrospective cohort study. The data used for the analysis in this study were obtained from the TCGA HNSC project. The clinical data were directly obtained from the TCGA data website while the gene expression data was from the UCSC xena browser derived from the same project. To assess the prognostic value of AHRR and CD8A based on overall survival, Kaplan–Meier curves and Cox proportional hazards models were used. The multivariable models were adjusted for the following covariates: age, gender, smoking status, AJCC, and ethnicity. The cancers that were considered were limited to primary tumors. The exclusion criteria includes the elimination of any samples that had any missing data necessary for the analysis. For smoking status and intensity analysis, ANOVA and Spearman correlation were used, respectively. Hazard ratios (HRs), 95% confidence intervals (CIs), and p-values were reported, with  $p < 0.05$  considered statistically significant.

**Results:**

After the analysis was conducted, increased expression of AHRR was found to be associated with improved overall survival, mainly in smokers-only group while for non-smokers where AHRR showed a similar protective trend but did not reach statistical significance. On the other hand, higher CD8A expression was strongly associated with overall survival regardless of smoking status, the only difference is that it stayed significant in both smokers and non-smoker subgroups which showed statistical independence from these factors.

**Conclusion:**

AHRR could be used as a smoking-dependent prognostic factor in HNSC patients, whereas CD8A is a tumor immune activity biomarker across all groups and categories.

**Keywords:** HNSC, AHRR, CD8A.

**STUDY CODE: OP-12**

**CLINICAL – BIOLOGICAL MISMATCH IN ALZHEIMER DISEASE: IMPLICATIONS FOR BIOMARKER DISCOVERY IN EARLY DIAGNOSIS**

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**Introduction:**

Alzheimer's disease (AD) pathology often precedes clinical symptoms by years, creating a clinical-biological mismatch where cognitively normal (CN) individuals harbor underlying pathology. Identifying this high-risk group is essential for early intervention.

**Methods:**

This retrospective study analyzed 1,647 participants from the ADNI database. Participants were categorized by cognitive status and biomarker profiles (CSF, PET, APOE  $\epsilon$ 4, and MMSE/ADAS-Cog scores). Statistical analyses included group comparisons and Cox regression to evaluate the risk of progression to Mild Cognitive Impairment (MCI).

**Results:**

A clinical-biological mismatch was identified in 2.6% of cognitively normal individuals. While MMSE scores remained stable in the CN group over 24 months ( $p=0.210$ ), CN biomarker-positive (CN/B+) individuals were 5.94 times more likely to carry the APOE4 allele than biomarker-negative peers ( $p=0.038$ ). Genetically, CN/B+ and MCI/B+ groups were indistinguishable ( $p=1.00$ ), confirming that biological disease onset occurs well before clinical decline. The CSF A $\beta$ 42/A $\beta$ 40 showed high diagnostic accuracy for the mismatch group (AUC = 0.832). ADAS-13 was the strongest clinical predictor of decline (HR = 2.173), while FDG-PET was the most potent biomarker predictor (HR= 0.655). Notably, APOE4 was a significant independent predictor specifically within the CN group (HR= 1.673).

**Conclusion:**

Standard cognitive screenings are inadequate for identifying early AD. The biological equivalence between CN/B+ and MCI/B+ groups supports a biomarker-based disease definition. A two-stage screening strategy-using APOE4 genotyping followed by confirmatory CSF or PET testing-could reduce invasive procedure requirements by 73%, facilitating timely disease-modifying therapy.

**Keywords:** Clinical–Biological Mismatch, Alzheimer's Disease Biomarkers, Preclinical Alzheimer's Disease.

**STUDY CODE: OP-13**

## **IMPLEMENTATION CHALLENGES OF HIV PREP AND DOXYPEP IN LOW- AND MIDDLE-INCOME SETTINGS**

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### **Introduction:**

Human immunodeficiency virus (HIV) and bacterial sexually transmitted infections (STIs) remain major global public health burdens, with approximately 39.9 million people living with HIV and over 370 million new bacterial STI cases annually. Significant gaps persist between clinical efficacy and real-world implementation, particularly in low- and middle-income countries (LMICs). This review aims to synthesize current evidence on the pharmacological efficacy, antimicrobial resistance dynamics, and structural implementation challenges of Pre-Exposure Prophylaxis (PrEP) and doxycycline post-exposure prophylaxis (DoxyPEP) in LMICs.

### **Methods:**

A systematic review was conducted to evaluate the efficacy, antimicrobial resistance dynamics, and implementation challenges associated with HIV Pre-Exposure Prophylaxis (PrEP) and doxycycline post-exposure prophylaxis (DoxyPEP) in low- and middle-income countries (LMICs). A comprehensive literature search was performed across PubMed/MEDLINE, Embase, and the Cochrane Central Register of Controlled Trials, supplemented by manual searches of *The Lancet HIV* and the *New England Journal of Medicine*. Studies published between January 2010 and March 2026 were screened according to predefined eligibility criteria focusing on pharmacological efficacy, resistance mechanisms, healthcare infrastructure, regulatory barriers, and socio-structural determinants affecting implementation in LMIC settings. A total of 85 studies were reviewed and synthesized in the final analysis.

### **Results:**

Long-acting PrEP formulations demonstrate substantially superior efficacy over daily oral regimens. The PURPOSE 2 trial showed that twice-yearly subcutaneous lenacapavir reduced HIV incidence by 96% relative to background rates and was 89% more effective than daily oral FTC–TDF. DoxyPEP reduces overall bacterial STI risk by approximately 46%, with greater reductions for chlamydia and syphilis. However, its utility against *Neisseria gonorrhoeae* is compromised by rising tetracycline resistance—mediated by the *tetM* gene and *mtrR* efflux pump mutations—as demonstrated by the failed dPEP Kenya trial. Implementation barriers include fragile healthcare systems, inconsistent medication supply chains, delayed regulatory approvals, limited diagnostic capacity, intersectional stigma, and criminalization of sexual minorities.

### **Conclusion:**

The primary barrier to effective HIV and STI prevention is no longer pharmacological efficacy but the conditions of implementation. Closing the global prevention gap requires integrating long-acting biomedical innovations with health system strengthening, context-specific antimicrobial stewardship, and rights-based public health policy.

**Keywords:** HIV prevention; Pre-Exposure Prophylaxis; doxycycline post-exposure prophylaxis.

**STUDY CODE: OP-14**

## **CORRELATION BETWEEN PES PLANUS AND MENISCAL TEAR INCIDENCE IN ORTHOPEDIC PATIENTS IN NORTHERN CYPRUS**

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### **Background:**

Knee pain is a prevalent musculoskeletal complaint, affecting nearly one-quarter of adults worldwide, with a rising incidence over recent decades (Bunt et al., 2018). Meniscal tears represent one of the most common contributors to knee pain and are frequently diagnosed on MRI (Ahmed et al., 2021). Pes planus alters lower-limb biomechanics through excessive pronation, hindfoot valgus, and increased tibial internal rotation (Hicks, 1954; Levinger et al., 2010), yet its potential association with meniscal injury has not been adequately explored.

### **Objective:**

To investigate the relationship between pes planus and meniscal injury in adults presenting with knee pain.

### **Methods:**

This prospective observational study included individuals aged 10–60 undergoing clinical assessment and knee MRI for suspected meniscopathy. Foot posture was evaluated radiographically using Meary's angle to assess pes planus. MRI-confirmed meniscal tears were classified according to their location and morphology. Associations between foot posture and meniscal pathology were analyzed using chi-square testing and Spearman correlation analysis.

### **Results:**

Thirty patients were included. The prevalence of pes planus was higher in patients with meniscopathy compared to those without (75.0% vs 66.7%), but this difference was not statistically significant ( $p = 0.742$ ). No significant associations were observed with medial or lateral meniscus involvement ( $p = 0.770$  for both) or knee osteoarthritis ( $p = 0.708$ ). Mean Meary's angle was higher in patients with meniscopathy ( $11.9 \pm 11.5$  vs  $6.7 \pm 3.6$ ), without statistical significance ( $p = 0.193$ ). No significant differences were observed for medial meniscus involvement ( $p = 0.688$ ). Correlation analysis showed a weak, non-significant relationship ( $r = 0.208$ ,  $p = 0.271$ ).

### **Conclusion:**

No significant association was identified between pes planus and meniscal pathology in this study. Larger studies are needed to further clarify this relationship.

**Keywords:** Pes Planus; Biomechanics; Meniscopathy.

**STUDY CODE: OP-15**

## **EPIDEMIOLOGY OF DEVELOPMENTAL DYSPLASIA OF THE HIP IN TRNC: THE FIRST RETROSPECTIVE HOSPITAL-BASED INCIDENCE STUDY AND COMPARISON WITH REGIONAL AND TURKISH DATA**

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### **Background and Aim:**

Developmental dysplasia of the hip (DDH) is a major pediatric musculoskeletal disorder requiring early diagnosis to prevent long-term morbidity, such as early degenerative arthritis [1]. The incidence of DDH varies significantly across different geographical regions and ethnic groups. While epidemiological data exists for Turkey and similar Mediterranean/European populations—with Turkish studies reporting incidences between 5–15 per 1,000, and international sonographic screening cohorts reporting rates that can reach up to 50 per 1,000—specific data for the Turkish Republic of Northern Cyprus (TRNC) remains unavailable. The aim of this study is to determine the hospital-based incidence of DDH at the largest tertiary referral center in the TRNC and compare the findings with regional and international literature to highlight the need for national screening policies.

### **Materials and Methods:**

A single-center, retrospective descriptive study was conducted evaluating infants aged 0–6 months who underwent hip ultrasonography at Dr. Burhan Nalbantoğlu State Hospital between 2024 and 2025. Data were extracted anonymously from electronic health records. Hip morphology was classified according to the Graf method. Due to bilateral reporting practices, evaluations were patient-based; infants with at least one dysplastic hip (Graf Type IIa or above) were classified as DDH-positive. Teratologic dislocations were excluded. Descriptive statistics and crosstabulations were performed using SPSS.

### **Results:**

A total of 460 valid infant cases (mean age:  $2.71 \pm 1.51$  months) were included in the analysis. The overall hospital-based incidence of DDH was calculated as 5.0% (50 per 1,000 infants). Normal hip maturation (Graf Type I) was observed in 95.0% (n=437) of the cases, whereas pathological/dysplastic features (Graf Type II and above) were detected in 5.0% (n=23). Gender distribution analysis revealed a significantly higher prevalence in females (7.3%, n=18/245) compared to males (2.3%, n=5/215).

### **Discussion and Conclusion:**

This study presents the first retrospective evidence on DDH epidemiology in the TRNC. The established hospital-based incidence of 50 per 1,000 is notably higher than the population-based averages reported in Turkey. However, it is highly consistent with the upper limits of sonographic dysplasia detection rates reported in broader Mediterranean and international cohorts. This high rate in our study is primarily attributed to "referral bias," reflecting the concentrated pathological case load typical of a tertiary referral center where suspected cases are directed. Despite limitations in accessing detailed patient history, this 5.0% detection rate underscores the vital importance of maintaining rigorous ultrasound screening protocols. These preliminary findings strongly advocate for the establishment of a universal, nationwide DDH screening registry in the TRNC.

**Keywords:** developmental dysplasia of the hip, incidence, neonatal screening.

**STUDY CODE: OP-16**

**RECURRENT CAUSTIC INGESTION IN TREATMENT-RESISTANT PARANOID SCHIZOPHRENIA COMPLICATED BY CATHETER-RELATED INTERNAL JUGULAR VEIN THROMBOSIS AND METHICILLIN-RESISTANT STAPHYLOCOCCUS EPIDERMIDIS BACTERAEMIA: A CASE REPORT**

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**Introduction:**

Caustic ingestion in adults is usually a single, impulsive event in the context of acute psychiatric decompensation. Recurrent deliberate ingestion in the same patient is uncommon and under-reported, and the second event is often dominated not by the burn itself but by predictable iatrogenic complications.

**Case Description:**

A 48-year-old man with treatment-resistant paranoid schizophrenia (ICD-10 F20.0), maintained on four antipsychotics including depot fluphenazine, valproate and rivaroxaban, was admitted after a second deliberate ingestion of an unidentified household corrosive, six months after an identical event. He presented with haematemesis, hoarseness, tachycardia and SpO<sub>2</sub> 90%. Contrast-enhanced CT showed laryngopharyngeal and oesophageal wall oedema with 30–50% airway narrowing. Oesophagogastroduodenoscopy on day 3 confirmed a circumferential Zargar grade IIB burn throughout the oesophagus with complete gastric sparing, suggesting an alkaline agent. Management was supportive: parenteral nutrition, intravenous proton-pump inhibition, dexamethasone, and empirical antibiotics. The course was complicated by right internal jugular vein and brachiocephalic trunk thrombosis adjacent to a malpositioned subclavian central venous catheter, and by methicillin-resistant *Staphylococcus epidermidis* bacteraemia (susceptible only to vancomycin and trimethoprim–sulfamethoxazole). Therapy was rationalised to vancomycin and therapeutic enoxaparin, tolerated despite erosive mucosa. He was discharged on day 30 to psychiatric rehabilitation on rivaroxaban.

**Discussion:**

Recurrent caustic ingestion in uncontrolled psychosis may represent a distinct clinical pattern in which the weakest link is post-discharge prevention, not acute care. Catheter malposition is a plausible driver of ipsilateral jugular thrombosis and supports ultrasound-guided insertion with post-procedural imaging. Methicillin-resistant coagulase-negative staphylococcal bacteraemia in a critically ill patient with an indwelling line should prompt empirical glycopeptide therapy, not be dismissed as contamination. Therapeutic anticoagulation can be feasible despite active corrosive mucosal injury when large-vein thrombosis demands it.

**Keywords:** caustic ingestion; catheter-related thrombosis; methicillin-resistant *Staphylococcus epidermidis*.

ABSTRACTS  
FOR  
POSTER PRESENTATIONS

**STUDY CODE: PP-01**

## **BRAINROT: THE DIGITAL DILEMMA FROM A NEUROLOGICAL PERSPECTIVE**

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### **Introduction:**

The brain is constantly being reshaped at the cellular level through neuroplasticity. The brain's lifelong adaptive mechanism continuously modifying and creating new neural pathways following daily experiences, consequently enabling constant learning, memory consolidation and injury recovery. The dependence of these neuronal modifications on experience paves way for maladaptive neuroplastic changes. In other words, the brain also adjusts to negative stimuli, acquiring dysfunctional traits such as mental fatigue, chronic anxiety, and reduced attention span. This study focuses on doomscrolling as the chief catalyst of mental decline while also analyzing the contemporary psychosocial phenomenon "brainrot", the metaphorical indication that over-consumption of low-quality digital content typically by the younger population or "Gen Z", leads to mental fog, reduced attention span, depression and emotional fatigue. The primary aim is to discuss the neuronal changes that stimulates digital media addiction, anxiety, and withdrawal-like symptoms causing a decline in daily productivity.

### **Methodology:**

This study employed a secondary research approach through a systematic review of peer-reviewed literature or articles published after 2020. Relevant studies were sourced from databases such as PubMed and Scopus, focusing on digital media use, attention, reward systems, behavioral addiction, and neuroplasticity.

### **Results:**

The findings revealed that excessive consumption of digital media not only takes up space for brain development, diminishing executive functions but is also associated with disrupted sleep patterns and shortened attention span. It also suggests that frequent exposure to rapid, high-stimulation content, engages the brain's reward circuit, particularly dopaminergic pathways, reinforcing habitual use. Significantly altering activation patterns in regions of the prefrontal cortex responsible for impulse control and decision making.

### **Conclusion:**

The study concluded by suggesting that the plasticity of the brain allows for both maladaptive and adaptive changes. Showcasing that behavioral interventions such as screen time reduction, improved sleep hygiene, exercise and intentional media consumption may help restore cognitive balance and alleviate the negative effects of excessive digital engagement.

**Keywords:** Brainrot, social media addiction, neuroplasticity.

**STUDY CODE: PP-02**

## **PERSONALIZED NANOMEDICINE IN ALZHEIMER'S DISEASE: PHARMACOGENOMICS MEETS NANOTECHNOLOGY**

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### **Introduction:**

Alzheimer's disease (AD) is a deteriorating neurodegenerative disorder characterized by complex pathophysiology involving tau hyperphosphorylation, amyloid- $\beta$  accumulation, neuroinflammation, synaptic dysfunction, and synaptic dysfunction. Despite extensive research, current therapeutic strategies fail to evaluate interindividual variability in drug response and remain largely symptomatic. Pharmacogenomics has appeared as a promising approach to identify genetic variants influencing drug efficacy, toxicity and metabolism, particularly genes such as CYP2D6, APOE, BACE1 and ABCB1. Nevertheless, the clinical translation of pharmacogenomics in AD is limited by difficulties in effective drug delivery across the blood-brain barrier (BBB).

### **Materials and Methods:**

Nanotechnology provides cutting-edge solutions by enabling controlled and targeted drug delivery systems capable of crossing the BBB. Nanocarriers including polymeric nanoparticles, lipid nanoparticles, exosomes, and dendrimers can be engineered with surface ligands and stimuli-responsive properties to reduce systemic toxicity and enhance brain targeting. Integrating nanocarrier design with pharmacogenomic data allows for the advancement of personalized nanomedicine strategies customized to individual genetic profiles.

### **Results:**

This study reviews the convergence of nanotechnology and pharmacogenomics in AD, underlining recent advances in precision drug delivery, nanodiagnosics and gene-targeted therapies. Preclinical evidence suggests that pharmacogenomics-guided nanomedicine reduces adverse effects, enhances patient stratification, and improves therapeutic efficacy. However, challenges remain, including regulatory barriers, scalability and the need for clinical validation.

### **Conclusion:**

In conclusion, personalized nanomedicine dignifies a revolutionary approach in Alzheimer's disease management, bridging the gap between targeted therapy and genetic profiling. Future studies should focus on the integration of multi-omics data and clinical translation to fully implement precision medicine in neurodegenerative diseases.

**Keywords:** Alzheimer's disease, Pharmacogenomics, Nanomedicine

## STUDY CODE: PP-03

# EVALUATION OF EASTERN MEDITERRANEAN UNIVERSITY FACULTY OF MEDICINE CLINICAL APPLICATION AND RESEARCH CENTER COGNITIVE SCREENING PROGRAM RESULTS

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### **Introduction/Background:**

Cognitive impairment in elderly individuals is influenced by multiple demographic, psychological, and clinical factors. This study aimed to evaluate the relative contributions of age, education, vascular risk factors, depression, and functional status to cognitive performance.

### **Methods:**

A cross-sectional study was conducted on 137 participants. Variables included age, years of education, vascular risk factors (hypertension, diabetes, cardiovascular disease), Mini-Cog score, Clock Drawing Test (CDT), Geriatric Depression Scale (GDS), and Lawton score. Statistical analyses included Spearman correlation, Mann–Whitney U, Kruskal–Wallis, and chi-square tests. A p-value <0.05 was considered significant.

### **Results:**

The mean age was 73.38±7.76 years, and the mean education duration was 10.63±4.63 years. Cognitive impairment based on CDT was observed in 33.6% of participants.

Age showed significant negative correlations with Mini-Cog ( $r = -0.253$ ,  $p = 0.003$ ) and CDT scores ( $r = -0.173$ ,  $p = 0.043$ ), while education was positively correlated with Mini-Cog ( $r = 0.272$ ,  $p = 0.001$ ) and CDT ( $r = 0.280$ ,  $p = 0.001$ ). Vascular risk factors demonstrated a weak correlation with Mini-Cog ( $r = -0.208$ ,  $p = 0.015$ ) but were not significantly associated with cognitive categories or CDT-based impairment.

Significant differences in age ( $p = 0.001$ ) and education ( $p = 0.018$ ) were observed across Mini-Cog categories. Depression levels (GDS) were significantly associated with gender ( $\chi^2 = 8.659$ ,  $p = 0.034$ ) and education ( $p = 0.009$ ), but showed no significant association with cognitive measures, age, or vascular risk factors. Lawton scores were not significantly associated with cognitive measures or other clinical variables.

### **Conclusion(s):**

Cognitive impairment in elderly individuals is primarily associated with increasing age and lower educational level. Vascular risk factors show limited contribution, while depression and functional status are more closely related to demographic factors than to cognitive performance. These findings highlight the importance of demographic factors in identifying individuals at risk for cognitive decline.

**Keywords:** Cognitive impairment, Aging, Education

## **STUDY CODE: PP-04**

### **EVALUATION OF GASTROENTERITIS SEVERITY IN CHILDREN UNDER FIVE IN RELATION TO CAREGIVER PRACTICES AND EARLY-LIFE MICROBIOTA-ASSOCIATED FACTORS**

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#### **Introduction:**

Acute gastroenteritis is a major cause of morbidity in children under five. Beyond clinical factors, caregiver practices and early-life exposures affecting gut microbiota—such as delivery mode and antibiotic use—may influence disease severity. This study aimed to evaluate the association between these factors and the clinical severity of gastroenteritis.

#### **Methods:**

This cross-sectional observational study included twenty-three caregivers of children under five presenting with acute gastroenteritis to pediatric outpatient clinics and emergency departments. The response rate was 52.3%. Data on caregiver practices, child characteristics, and early-life factors (e.g., delivery mode and antibiotic exposure) were collected using a structured questionnaire developed by combining items from validated instruments. Clinical severity was assessed using a modified GASTROVIM scale adapted for analysis. Associations were analysed via Chi-square and Fisher's Exact tests in SPSS;  $p < 0.05$  was considered significant.

#### **Results:**

Among valid responses ( $n=20$ ), GASTROVIM severity was mild in 50.0%, moderate in 45.0%, and severe in 5.0%. Preliminary analysis showed no statistically significant association was found between clinical severity and fluid management practices ( $\chi^2 = 3.206$ ,  $p = 0.524$ ; Fisher's exact  $p = 0.560$ ), with most caregivers increasing fluid intake regardless of severity (84.2%). Similarly, early-life antibiotic exposure was not associated with disease severity (0–6 months  $p = 0.217$ ; 6–12 months  $p = 0.537$ ), nor was delivery method including microbiota transfer ( $\chi^2 = 3.242$ ,  $p = 0.518$ ; Fisher's exact  $p = 0.546$ ). Probiotic use ( $\chi^2 = 3.257$ ,  $p = 0.516$ ; Fisher's exact  $p = 0.788$ ) and nursery attendance ( $\chi^2 = 4.511$ ,  $p = 0.341$ ; Fisher's exact  $p = 0.268$ ) were also not significantly associated, with comparable distributions across all groups.

#### **Conclusion:**

In this study, caregiver practices and early-life microbiota-related factors were not significantly associated with gastroenteritis severity, suggesting that these variables may have limited influence on the clinical course.

**Keywords:** Gastroenteritis, caregiver practices, microbiota associated factors.

**STUDY CODE: PP-05**

## **COMPARATIVE CYTOTOXICITY OF CARBOPLATIN AND QUERCETIN IN MCF-7 BREAST CANCER CELLS**

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### **Background:**

Breast cancer remains one of the most prevalent malignancies worldwide, highlighting the need for more effective and less toxic therapeutic strategies. Carboplatin, a platinum-based chemotherapeutic agent, is widely used in cancer treatment; however, its efficacy may be limited by drug resistance and adverse effects. Natural compounds such as quercetin have attracted attention due to their potential anticancer properties, although their effectiveness as single agents remains unclear. The MCF-7 cell line, a well-established estrogen receptor-positive human breast cancer model, is widely used to investigate tumor biology and drug response. This study aimed to evaluate and compare the cytotoxic effects of carboplatin and quercetin on MCF-7 breast cancer cells based on IC<sub>50</sub> (median-effect dose) values.

### **Material and Methods:**

MCF-7 breast cancer cells were treated with increasing concentrations of carboplatin and quercetin. Cell viability was assessed using dose-response analysis after 24 hours of treatment. IC<sub>50</sub> values were calculated using CompuSyn software based on the Chou-Talalay method.

### **Results:**

Carboplatin demonstrated a dose-dependent cytotoxic effect, with increased inhibition of cell viability at higher concentrations. The IC<sub>50</sub> value for carboplatin was 92.49 µM, indicating moderate cytotoxic potency. In contrast, quercetin exhibited a weaker cytotoxic effect, with a markedly higher IC<sub>50</sub> value of 907.70 µM, suggesting low potency as a single agent. Correlation coefficient analysis showed a strong dose-effect relationship for carboplatin ( $r = 0.95$ ) and a moderate relationship for quercetin ( $r = 0.85$ ).

### **Conclusion:**

Carboplatin exhibits significantly greater cytotoxic efficacy compared to quercetin in MCF-7 breast cancer cells. Although quercetin alone shows limited cytotoxic activity, it may have potential value in combination therapies to enhance chemotherapeutic efficacy.

**Keywords:** Carboplatin, quercetin, MCF-7.

**STUDY CODE: PP-06**

**TOPICAL MUMMY SUBSTANCE ACCELERATES CUTANEOUS REPAIR AND TISSUE ORGANIZATION: EVIDENCE FROM AN IN VIVO MODEL**

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**Introduction:**

Wound healing is an important biological process and therefore there is a need for natural-based therapies such as traditional remedies. One such remedy is mummy substances with anti-inflammatory, antioxidant, and antimicrobial activities. Based on in vitro studies of positive effects of mummy substance on wound repair, present study is aimed to evaluate the topical efficacy of Mummy substance in a murine excisional wound model. The effect of mummy substance gel on skin wound closure and tissue organization was studied in a murine excisional model.

**Material and Methods:**

In study involving thirty-two male C57 mice divided into four groups (n = 8 each), wounds were treated with either an untreated control, anionic gel base, Cicaplast® (5% panthenol/madecassoside), or Mummy substance gel (1 mg/g). A full-thickness excisional wound of 1 cm<sup>2</sup> was created under anesthesia, with three animal losses. Each treatment was administered topically at 300 mg once daily, and wound area was quantified using digital photographs and ImageJ software at designated time points for both acute and repair phases.

**Results:**

During the early stages, wound healing rates were comparable across all groups. However, from day 10 onward, the Mummy substance-treated group demonstrated a more pronounced reduction in wound area. By day 12, this group exhibited the greatest degree of wound contraction. In addition, wounds in the Mummy substance group showed more uniform and circular closure patterns, indicating improved tissue organization compared to other groups.

**Conclusion:**

Early closure rates were similar, but day 12 mummy substances showed a more pronounced reduction of wound surface area and more uniform contraction than other groups, indicating improved tissue organization even at low concentration (1 mg/g).

**Keywords:** wound healing; excisional wound model; morphometry.

**STUDY CODE: PP-07**

**BREATH REGULATION AND FOREIGN LANGUAGE ANXIETY: A PILOT NEUROCOGNITIVE INTERVENTION FOR ENHANCING L2 SPEAKING CONFIDENCE AMONG UNIVERSITY EFL LEARNERS**

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**Introduction:**

Foreign language speaking anxiety continues to affect learners' communicative participation, confidence, and oral performance across English as a Foreign Language (EFL) classrooms. While previous scholarship has extensively examined affective variables in second language acquisition, limited classroom-based research has explored neurocognitive self-regulation strategies capable of supporting emotional readiness during speaking activities. This pilot study investigated whether guided breath regulation could reduce speaking anxiety and improve communicative confidence among university EFL learners.

**Materials and Methods:**

The study adopted a mixed-methods pilot intervention design involving ten undergraduate EFL learners enrolled in a university oral communication course. Over four weeks, participants engaged in brief guided breathing exercises before selected classroom speaking activities. Quantitative data were collected through adapted speaking-anxiety and speaking-confidence scales administered before and after the intervention. In contrast, qualitative data were obtained through reflective journals, classroom observations, and semi-structured interviews. Quantitative responses were analyzed descriptively, while qualitative data were examined thematically.

**Results:**

Findings indicated modest reductions in self-reported speaking anxiety alongside increased willingness to participate in oral interaction tasks. Participants frequently associate breathing exercises with emotional calmness, improved concentration, and greater psychological readiness before speaking activities. Qualitative reflections further suggested that the intervention supported communicative participation by reducing tension during oral tasks.

**Conclusion:**

Although exploratory in scope, the study contributes to emerging interdisciplinary discussions connecting neuroeducation, emotional regulation, and communicative language teaching. The findings suggest that guided breath regulation may serve as a practical, low-cost classroom strategy for fostering emotionally sustainable speaking environments in EFL contexts. Further research involving larger participant groups and extended intervention periods is recommended.

**Keywords:** foreign language anxiety; breath regulation; communicative confidence

**STUDY CODE: PP-08**

**DEVELOPMENT AND VALIDATION OF A SCALE TO EVALUATE AI-INTEGRATED ANATOMY LEARNING AMONG MEDICAL STUDENTS**

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**Introduction:**

Anatomy education is undergoing rapid change with the increasing integration of artificial intelligence (AI). Although medical students frequently report that AI tools enhance their understanding of complex anatomical structures compared with traditional methods, there is still a lack of standardized instruments to systematically measure these perceptions. We aimed to develop and validate a scale for evaluating medical students' use of AI in anatomy learning, focusing on their perceptions, experiences, and factors influencing their attitudes toward AI integration in education.

**Materials and Methods:**

A structured framework was used to develop and validate the psychometric properties of the questionnaire. The study will include approximately 150 medical students. The instrument consists of a section titled "AI Evaluation: Cognitive Understanding of Anatomy," including 20 Likert-type items rated on a 5-point scale. Additional items assess sociodemographic characteristics, familiarity with AI, study habits, and academic background to provide contextual variables related to AI perceptions.

**Results:**

Data from approximately 150 students will be analyzed. Sampling adequacy will be evaluated using the Kaiser–Meyer–Olkin (KMO) measure and Bartlett's test of sphericity. Construct validity will be assessed through EFA. It is anticipated that several latent factors will emerge, reflecting dimensions such as AI's contribution to anatomical understanding, learning experience, and motivation. Internal consistency will be evaluated using Cronbach's alpha to determine reliability.

**Conclusion:**

The findings are expected to support the use of the developed scale as a valid and reliable instrument for assessing cognitive aspects of AI use in anatomy learning among medical students. The study also aims to enhance understanding of students' perceptions of AI in medical education and provide a basis for future research.

**Keywords:** Anatomy education; Artificial intelligence; Education-Abstract-CHSSU Questionnaire development.

**STUDY CODE: PP-09**

## **PERCEIVED COMPETENCE OF PRE-CLINICAL PHASE MEDICAL STUDENTS IN PERFORMING FIRST AID SKILLS AFTER TRAINING**

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### **Introduction:**

First aid knowledge and total perceived competence are key indicators of preparedness among pre-clinical medical students. This study aimed to assess these outcomes among pre-clinical medical students at Eastern Mediterranean University Faculty of Medicine and examine their associations with gender, academic year, and completion of first-year training.

### **Material and Methods:**

A structured cross-sectional survey was conducted among Year 1, Year 2, and Year 3 medical students. The independent variables were gender, academic year, and completion of first-year training; the dependent variables were total knowledge score and total perceived competence score. Data were obtained from 115 completed questionnaires. Objective knowledge was assessed using an eight-item score, and total perceived competence using a 13-item Likert scale. Because both scores were non-normally distributed, the Mann-Whitney U test, Kruskal-Wallis test, and Spearman's rank correlation test were used.

### **Results:**

The mean age was  $19.80 \pm 1.63$  years, and 52.2% were female. The mean total knowledge score was  $6.41 \pm 1.73$ , with 47.8% demonstrating high knowledge. The mean total perceived competence score was  $45.20 \pm 8.42$ , and 60.7% reported moderate competence. Only 22.6% had provided first aid in a real-life emergency, while 90.4% indicated that refresher training is necessary. Total perceived competence score differed by academic year ( $p = 0.028$ ) and completion of first-year training ( $p = 0.047$ ). Female students demonstrated higher total knowledge scores than male students ( $p = 0.001$ ). Total knowledge score and total perceived competence score showed a weak but significant positive correlation ( $r_s = 0.275$ ,  $p = 0.003$ ).

### **Conclusion:**

Students demonstrated moderate to high first aid knowledge; however, knowledge did not strongly correspond to total perceived competence. These findings indicate a preparedness gap and support repeated practical refresher training.

**Keywords:** First aid; medical students; perceived competence.

**STUDY CODE: PP-10**

## **LABORATORY SAFETY AWARENESS AND KNOWLEDGE OF MEDICAL STUDENTS**

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### **Background:**

Laboratory safety awareness is essential for preventing laboratory accidents and ensuring safe laboratory practices among students. This study aimed to evaluate medical students' laboratory safety awareness and knowledge.

### **Methods:**

A questionnaire-based cross-sectional study was conducted with 115 medical students. The survey included demographic questions and 23 multiple-choice laboratory safety items. Data were analyzed using descriptive statistics in SPSS.

### **Results:**

Participants demonstrated generally satisfactory laboratory safety awareness and knowledge. High correct response rates were observed in identifying explosive hazard symbols (96.52%) and corrosive substances (93.04%). Most students also correctly answered questions related to laboratory hygiene and safety responsibilities. However, knowledge of the proper storage of volatile and flammable chemicals was limited, with only 40.87% of participants selecting the correct storage method. Awareness of emergency response procedures also showed lower accuracy (53.91%). The overall mean questionnaire score was 18.28 out of 23.

### **Conclusion:**

The findings indicate that medical students generally possess satisfactory laboratory safety awareness. However, deficiencies in chemical storage knowledge and emergency response procedures highlight the need for additional laboratory safety education and practical training

**Keywords:** Laboratory Safety, Student Awareness, Hazard Recognition

**STUDY CODE: PP-11**

## **SUFFICIENCY OF THEORETICAL MICROBIOLOGY AND HISTOLOGY COURSES ON LABORATORY FOR MEDICAL STUDENTS**

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### **Introduction:**

The integration of theoretical and practical education in microbiology and histology is essential for effective medical training. This study aimed to evaluate whether theoretical knowledge is sufficient for laboratory application and to assess students' perceptions of theory-practice integration.

### **Material and Methods:**

A descriptive cross-sectional study was conducted among preclinical medical students at Eastern Mediterranean University. The research included 135 students, and a 101 questionnaire was obtained. Data were collected using a structured, self-administered questionnaire assessing academic performance, laboratory attendance, and perception of integration. Data were analyzed using descriptive statistics.

### **Results:**

Students reported positive perceptions of laboratory- theory integration. Around 40-46% agreed that laboratory sessions improved understanding and confidence in both histology and microbiology. The majority of participants (67.7%) preferred lectures followed immediate hand-on practice. Key concerns included weak integration between theory and laboratory sessions, inadequate scheduling, and excessive emphasis on technical skills, with suggestions for better alignment, and more laboratory sessions.

### **Conclusion:**

Laboratory sessions significantly support theoretical learning. However, improvement in integration, timing, and teaching strategies are needed so that these methodological limitations may enhance the reliability of future studies.

**Keywords:** Medical students, microbiology and histology, theoretical and laboratory sessions.

**STUDY CODE: PP-12**

**PARTICIPATION IN SOCIAL AND EXTRACURRICULAR ACTIVITIES AND MENTAL HEALTH OF MEDICAL STUDENTS: A CROSS-SECTIONAL STUDY AT EASTERN MEDITERRANEAN UNIVERSITY**

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**Introduction:**

Medical students frequently experience significant stress due to academic demands, which may negatively affect their psychological well-being. Social and extracurricular activities are considered potential protective factors that may improve mental health outcomes. This study aimed to examine the association between participation in such activities and perceived stress, psychological well-being, and emotional benefits among medical students of EMU.

**Methods:**

An analytical cross-sectional study was conducted among medical students, using simple random sampling. Of 160 students invited, 135 were targeted as the required sample size; 116 completed the questionnaire (response rate: 72.5%). Data were collected via a structured self-administered questionnaire with independent variables of sociodemographic variables and participation characteristics and dependent variables including the Perceived Stress Scale (PSS-10), WHO-5 Well-Being Index, and a researcher-developed emotional benefit scale (Cronbach's  $\alpha = 0.825$ ). Analyses included independent t-tests, chi-square tests, ANOVA, correlation, and multiple regression using SPSS.

**Results:**

Mean age was  $19.93 \pm 1.62$  years, 55.2% were female, and 54.3% of students participated in activities. Stress levels were predominantly moderate (79.3%), and poor well-being was reported by 61.7%. No statistically significant difference in stress levels was found between participants and non-participants ( $p=0.156$ ). However, participants reported significantly lower well-being scores compared to non-participants ( $p=0.006$ ). Emotional benefit scores among participants were relatively high (mean= $16.59 \pm 2.93$ ). No significant association was found between participation level and stress or well-being; however, a significant interaction between gender and participation was observed for stress ( $p=0.033$ ). Multiple regression revealed that greater participation scores independently predicted poor well-being scores ( $\beta=-0.306$ ,  $p=0.019$ ), while female gender independently predicted higher stress ( $\beta=0.313$ ,  $p=0.015$ ).

**Conclusion:**

Social participation provided perceived emotional benefits but was neither associated with reduced stress nor improved well-being; participants demonstrated poorer well-being, and gender moderated the stress relationship. These findings suggest complex underlying mechanisms between social participation and mental health, highlighting the need for further research.

**Keywords:** Social participation; perceived stress; well-being.

**STUDY CODE: PP-13**

## **MEDICAL STUDENTS' USE AND ACCEPTANCE OF AI CHATBOTS IN MEDICAL EDUCATION**

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### **Introduction:**

In the medical students' school, AI chatbots are the main tools that aid in learning of various aspects, exam preparation, and summarization and academic processing, and they are being more widely used as a tool for abstract thought. Although these tools have potential for pedagogical purposes, challenges still remain in accuracy, dependence, privacy, and fairness. The present study sought to evaluate AI chatbot usage patterns, perceived benefits and concerns, and user acceptance among undergraduate medical students.

### **Methods:**

This was a cross-sectional questionnaire-based study of Year 1-3 medical students at Eastern Mediterranean University. Data on sociodemographic characteristics, study habits, use of AI, perceived advantages and challenges, and acceptance of AI were obtained from the questionnaire via items which were customized based on the Unified Theory of Acceptance and Use of Technology framework. Results were assessed by SPSS analysis. Descriptive statistics were reported in the form of Frequency, Percent, Mean, and standard deviation. All group comparisons were statistically analyzed with appropriate tests ( $p < 0.05$  was considered to be significant).

### **Results:**

A total of 126 students took part in this research. The majority of participants were female (58.7%) and first year (44.4%). Academic AI chatbot use was common, with 96.8% students reporting previous use. According to valid replies, 74.0% indicated daily AI utilization. Improvements in understanding, time saving and support for exam preparation were the most commonly perceived benefits. Average Acceptance Score for AI (mean±SD: 5.04±1.01). Higher mean performance expectancy, effort expectancy, and facilitating conditions were scored, whereas social influence at baseline was rated moderate. A total of 27.0% of students are concerned about AI, in particular the risk of mistakes, privacy issues and over-reliance. Frequency of AI use was significantly correlated with total acceptability of AI ( $p=0.001$ ).

### **Conclusion:**

AI-chatbot use was a high frequency of usage among medical students enrolled in undergraduate training classes across the board. AI is seen as an academic support tool for students, but the challenges associated, such as reliability and ethical use, demand formal guidance and institutional policies.

**Keywords:** Artificial intelligence; Medical students; UTAUT

**STUDY CODE: PP-14**

## **EARTHQUAKE-RELATED ANXIETY, AWARENESS & PREPAREDNESS AMONG EMU MEDICAL STUDENTS**

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### **Introduction:**

Earthquakes cause profound psychological and public health impacts, as highlighted by the 2023 Türkiye seismic events. While medical students are vital future healthcare providers, their earthquake knowledge and readiness remain understudied. This study focuses on EMU Phase I students transitioning to Istanbul for clinical training a high-risk population to assess and analyze their earthquake-related anxiety, awareness, and preparedness levels.

### **Material and Methods:**

This cross-sectional study was conducted among medical students at the Faculty of Medicine at Eastern Mediterranean University. Data were collected using a self-administered questionnaire consisting of three parts: the Earthquake Anxiety Scale (EAS), the Earthquake Awareness Scale (SEAS), and the Preparedness Level Checklist. Statistical analysis was performed using SPSS, applying nonparametric tests including Mann–Whitney U test, Kruskal–Wallis H test, Spearman’s rho correlation, Chi-square test.

### **Results:**

Among 110 EMU Phase I medical students, participants showed moderate earthquake-related anxiety (EAS:  $2.52 \pm 0.88$ ) and awareness (SEAS:  $2.65 \pm 0.58$ ). However, only 19.44% were highly prepared, completing just 46.43% of recommended actions. Females reported significantly higher anxiety than males ( $p=0.030$ ), and prior experience was the strongest predictor of preparedness ( $p=0.005$ ). Disaster education had no significant impact ( $p>0.05$ ), though both anxiety ( $\rho=0.305$ ,  $p<0.01$ ) and awareness ( $\rho=0.255$ ,  $p<0.05$ ) positively correlated with preparedness.

### **Conclusion:**

Among 110 EMU medical students, participants showed moderate earthquake-related anxiety ( $2.52 \pm 0.88$ ) and awareness ( $2.65 \pm 0.58$ ). However, only 19.44% were highly prepared, completing just 46.43% of recommended actions. Females reported significantly higher anxiety ( $p=0.030$ ), while prior experience was the strongest predictor of preparedness ( $p=0.005$ ). Disaster education had no significant impact ( $p>0.05$ ), though anxiety ( $\rho=0.305$ ,  $p<0.01$ ) and awareness ( $\rho=0.255$ ,  $p<0.05$ ) both positively correlated with preparedness.

**Keywords:** earthquake, anxiety, awareness, preparedness

## **STUDY CODE: PP-15**

### **SLEEP QUALITY AS A DETERMINANT OF PHYSICAL HEALTH-RELATED QUALITY OF LIFE**

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#### **Introduction:**

Sleep quality is a multidimensional construct encompassing efficiency, latency, continuity, and subjective satisfaction, extending beyond total sleep duration. Medical students are particularly vulnerable to sleep disturbances due to heavy academic workloads, irregular schedules, and clinical responsibilities. Poor sleep quality has been associated with reduced health-related quality of life (HRQoL). This study examined the relationship between sleep quality and physical HRQoL among preclinical medical students at Eastern Mediterranean University.

#### **Material and Methods:**

A quantitative, cross-sectional study was conducted among 107 first- to third-year medical students (response rate: 78.1%) at Dr. Fazıl Küçük Faculty of Medicine, Eastern Mediterranean University, recruited via simple random sampling. Data were collected using a sociodemographic questionnaire, the Pittsburgh Sleep Quality Index (PSQI), and the Short Form-12 Health Survey (SF-12), yielding Physical Component Summary (PCS-12) and Mental Component Summary (MCS-12) scores. Spearman and Pearson correlation analyses, Mann-Whitney U test, and Kruskal-Wallis test were applied; significance was set at  $p < 0.05$ .

#### **Results:**

The mean age was  $20.28 \pm 2.44$  years; 56.1% of participants were female. The mean Global PSQI Score was  $7.42 \pm 3.39$ , with 64.2% classified as poor sleepers (PSQI > 5). Mean PCS-12 and MCS-12 scores were  $13.31 \pm 2.62$  and  $13.74 \pm 2.45$ , respectively. A significant negative correlation was found between Global PSQI Score and PCS-12 ( $\rho = -0.489$ ,  $p < 0.001$ ), indicating that poorer sleep quality was associated with lower physical HRQoL. No significant correlation was observed between PSQI and MCS-12 ( $r = 0.111$ ,  $p = 0.291$ ). Sleep quality differed significantly across academic years ( $p = 0.009$ ), with Year 2 and Year 3 students reporting worse sleep than Year 1 students.

#### **Conclusion:**

Poor sleep quality is highly prevalent among preclinical medical students and is significantly associated with reduced physical health-related quality of life. These findings highlight the need for targeted sleep health interventions within medical education to protect student wellbeing and long-term professional performance.

**Keywords:** Sleep quality, Health-related quality of life, medical students.

**STUDY CODE: PP-16**

**RELATIONSHIP BETWEEN PERCEIVED STRESS AND PHYSICAL ACTIVITY  
AMONG EMU MEDICAL STUDENTS**

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**Introduction:**

Medical education presents intense academic and clinical demands that often lead to high levels of psychological stress among students. While physical activity is frequently proposed as a protective factor, existing evidence regarding its impact on stress remains inconsistent. This study aimed to investigate the relationship between perceived stress and physical activity levels among medical students at EMU.

**Material and Methods:**

A cross-sectional, questionnaire-based study was conducted among 119 medical students. Data were collected using the Perceived Stress Scale (PSS) and International Physical Activity Questionnaire (IPAQ). Data analysis was performed via SPSS, including descriptive statistics along with inferential tests such as Chi-square, Mann-Whitney U and Kruskal-Wallis tests. The statistical significance was set at  $p < 0.05$ .

**Results:**

Among the 119 respondents, 59.7% were females, 36.1% were males and the remaining 4.2% did not disclose their gender. With respect to year of study most participants were first year students (50.4%), followed by second year (27.7%) and third year students (21.8%). The participants had a mean PSS score of  $21.2 \pm 6.9$  and 67.2% of them were classified as having moderate perceived stress, while 55% of participants demonstrated moderate levels of physical activity. No significant relationship was found between perceived stress and physical activity ( $p = 0.582$ ); however, physical activity was significantly associated with gender ( $p = 0.004$ ) and mode of transportation to the faculty ( $p = 0.042$ )

**Conclusion:**

Although moderate stress was prevalent, no significant relationship was found between stress levels and physical activity. However, the significant associations of physical activity with gender and transportation suggest that lifestyle patterns are driven by demographic and environmental factors, highlighting the need for targeted campus wellness initiatives.

**Keywords:** Perceived Stress, Physical Activity, Medical Students.

**STUDY CODE: PP-17**

**EVALUATION OF AWARENESS, ATTITUDES, AND BEHAVIOURS REGARDING PRENATAL TESTS AMONG PREGNANT WOMEN: A CROSS-SECTIONAL STUDY IN FAMAGUSTA, NORTHERN CYPRUS**

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**Background:**

Prenatal screening and diagnostic tests are essential for assessing the risk of fetal chromosomal abnormalities and guiding clinical decision-making during pregnancy. However, awareness and acceptance of these tests may vary among pregnant women and influence testing behaviour. Data on these factors in Northern Cyprus remain limited.

**Material and Methods:**

This cross-sectional, descriptive study was conducted among pregnant women attending obstetrics and gynaecology outpatient clinics of state and private hospitals in Famagusta. Data were collected using a structured questionnaire assessing sociodemographic characteristics, awareness, attitudes, and behaviours related to prenatal tests (NIPT, double screening test, and amniocentesis). Participation was voluntary and anonymous, and a total of 40 women completed the survey. Descriptive and comparative analyses were performed. This analysis presents preliminary findings from an ongoing study.

**Results:**

The mean age was 30.33±5.59 years, and the mean gestational age was 25.97±9.12 weeks. Awareness was highest for the double screening test (85%) and general prenatal testing knowledge (75%), while awareness of NIPT and amniocentesis was lower (both 47.5%). The primary source of information was obstetricians/gynaecologists (72.5%). Most participants considered prenatal tests necessary (85%) and informative (95%). The double screening test was the most commonly performed test (50%), whereas amniocentesis had the highest rate of non-acceptance (45%). The most commonly reported reasons for testing were obtaining information about fetal health (70%), early detection (62.5%), and physician recommendation (60%). The main reported reasons for not testing included concern about potential harm to the baby (30%) and intention to continue the pregnancy regardless of the result (25%). Higher education level was significantly associated with greater awareness of NIPT ( $p=0.013$ ) and amniocentesis ( $p=0.044$ ), and with increased willingness to undergo amniocentesis if recommended by a physician ( $p=0.035$ ).

**Conclusion:**

These preliminary findings suggest that although overall awareness and positive attitudes toward prenatal testing are relatively high, important gaps remain—particularly regarding advanced tests such as NIPT and amniocentesis. Educational level appears to play a role in both awareness and willingness to undergo testing. Concerns about potential harm to the baby and the intention to continue the pregnancy regardless of the result were among the most commonly reported reasons for not undergoing prenatal testing. Strengthening patient education and counselling may support more informed and individualized decision-making regarding prenatal testing.

**Keywords:** Prenatal testing, awareness, attitudes, pregnant women, North Cyprus.

**STUDY CODE: PP-18**

## **KNOWLEDGE AND ATTITUDES OF EMU MEDICAL STUDENTS TOWARD SPINAL MUSCULAR ATROPHY (SMA)**

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### **Introduction:**

Spinal Muscular Atrophy (SMA) is a devastating autosomal recessive neuromuscular disorder characterized by the loss of alpha motor neurons. The clinical complexity of the disease and medical students' awareness are pivotal for early intervention and ethical patient management. This study aimed to investigate the knowledge and attitudes of Eastern Mediterranean University (EMU) medical students about SMA.

### **Methods:**

A cross-sectional descriptive study was conducted among preclinical medical students (N=142, response rate: 97.93%). Questionnaires were distributed to collect data. Statistical analyses were performed using IBM SPSS v26.0. Knowledge scores were compared across academic years using One-Way ANOVA and Independent Samples T-test. The correlation between interest in genetics and knowledge levels was assessed using Pearson correlation, while the impact of social media on clinical prioritization was analyzed via Spearman's rank correlation (rs), with  $p < 0.05$  defining statistical significance.

### **Results:**

The cohort comprised 54.23% females, with 82.39% having completed a genetics-related course. A significant progression in SMA knowledge was observed across academic years 3rd-year students demonstrated the highest proficiency (mean=22.38±4.41). , While 83.1% correctly identified the inheritance pattern, knowledge regarding carrier frequency remained limited (50.7%). A significant positive correlation was found between interest in genetics and knowledge scores.

### **Conclusion:**

Although academic progression correlates with increased theoretical knowledge, specific clinical and epidemiological gaps persist among medical students. The strong link between genetic interest and knowledge suggests that fostering early engagement with rare diseases may enhance professional preparedness. These results underscore the importance of integrating comprehensive genetic counseling and evidence-based ethics into the medical curriculum.

**Keywords:** Spinal Muscular Atrophy, Medical Education, Rare Diseases.

**STUDY CODE: PP-19**

## **VACCINATION ATTITUDES, PERCEIVED KNOWLEDGE, AND VACCINE HESITANCY AMONG EMU MEDICAL STUDENTS**

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### **Introduction:**

Vaccine hesitancy is an important global public-health issue that affects vaccine uptake, including among medical students, who are expected to promote vaccination in their future clinical practice. This study aimed to assess vaccination attitudes, perceived knowledge, and vaccine hesitancy among medical students at the Eastern Mediterranean University (EMU) Faculty of Medicine, and to identify factors associated with more hesitant attitudes.

### **Methods:**

A cross-sectional study was conducted during the 2025–2026 academic year among Year 1, Year 2, and Year 3 medical students at EMU. Data were collected using a self-administered questionnaire distributed to voluntary participants. The instrument included demographic and vaccine-history items, the Oxford Vaccine Hesitancy Scale (OVHS), and additional questions related to perceived risks, trust in healthcare institutions, social influences, accessibility, and willingness to receive vaccines. Responses were measured using Likert-scale and multiple-choice items. Data were analyzed using SPSS with descriptive and inferential statistical methods.

### **Results:**

A total of 98 students participated in the study. The overall Mean\_OVHS score was  $3.75 \pm 0.59$ , indicating generally positive attitudes toward vaccination and relatively low vaccine hesitancy. The statement “Vaccines save lives” had the highest mean score ( $4.17 \pm 1.01$ ), whereas “Drug companies prioritize profit over safety in vaccine development” had the lowest ( $2.76 \pm 0.92$ ). Year 3 students had the highest Mean\_OVHS ( $4.20 \pm 0.45$ ), followed by Year 1 ( $3.70 \pm 0.59$ ) and Year 2 ( $3.53 \pm 0.54$ ), with a statistically significant difference across years of study ( $p < 0.001$ ). No significant gender difference was found ( $p = 0.646$ ).

### **Conclusion:**

EMU medical students generally showed favorable attitudes toward vaccination, and higher academic year was associated with lower hesitancy. Continued vaccine education is recommended.

**Keywords:** vaccine hesitancy, vaccination attitudes, perceived knowledge, OVHS.

**STUDY CODE: PP-20**

## **HPV KNOWLEDGE, VACCINATION STATUS, AND ATTITUDES TOWARD HPV VACCINATION AMONG UNIVERSITY STUDENTS**

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### **Introduction:**

Human papillomavirus (HPV) is one of the most common sexually transmitted infections worldwide and is associated with several cancers, including cervical, anal, penile, and oropharyngeal cancers. Although effective vaccines are available, vaccination rates remain low due to insufficient knowledge, misconceptions, and limited awareness. University students are an important target population because they are within the recommended vaccination age group and may be at increased risk. This study aimed to assess HPV knowledge, vaccination status, and attitudes toward HPV vaccination among Eastern Mediterranean University (EMU) students.

### **Materials and Methods:**

A cross-sectional descriptive study was conducted among undergraduate students at EMU during the 2025–2026 academic year. Using proportionate stratified sampling, 410 students participated in the study. Data were collected through a structured questionnaire consisting of demographic information, the 33-item HPV Knowledge Scale (HPV-KS), and vaccination-related attitudes and behaviors. Data were analyzed using descriptive statistics, independent samples t-tests, one-way ANOVA, and chi-square tests.

### **Results:**

The mean age of participants was  $20.89 \pm 2.13$  years, and 64.9% were female. The mean HPV knowledge score was  $14.94 \pm 6.19$ , indicating moderate knowledge levels. Only 15.1% of participants had completed HPV vaccination, while 72.2% were unvaccinated. Lack of information was the most common reason for vaccine refusal (35.4%). HPV knowledge scores were significantly associated with faculty ( $p < 0.001$ ), year of study ( $p < 0.001$ ), vaccination status ( $p = 0.033$ ), and attitudes toward vaccination ( $p = 0.002$ ).

### **Conclusion:**

HPV knowledge among university students was moderate, while vaccination uptake was low. Educational interventions and awareness programs are needed to improve HPV vaccination rates among young adults.

**Keywords:** HPV, vaccination, university students.

**STUDY CODE: PP-21**

## **KNOWLEDGE OF PROPER ANTIBIOTICS USE AND ITS ASSOCIATION WITH ANTIBIOTICS USE BEHAVIOUR ACROSS DIFFERENT FACULTIES IN THE CYPRUS INTERNATIONAL UNIVERSITY**

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### **Introduction:**

This study aimed to assess the level of knowledge regarding appropriate antibiotic use and examine its association with antibiotic-use behavior among students from different faculty groups at Cyprus International University. Antibiotic misuse remains a critical global health issue, contributing significantly to the development of antibiotic resistance, which threatens effective treatment outcomes and increases healthcare burdens worldwide. Understanding how knowledge influences behavior is essential for designing targeted interventions to promote rational antibiotic use.

### **Methods:**

An observational analytical cross-sectional study design was employed, involving 138 university students from five departments: Health Sciences, Engineering and Science, Economics and Management, Computer and Information, and Education and Social Sciences. Data were collected using the Antibiotic Knowledge and Consumption Tool (AKCT) via an anonymous online survey. Knowledge scores were calculated based on correct, incorrect, and uncertain responses, while antibiotic-use behavior was self-reported. Statistical analyses included descriptive statistics, ANOVA, and crosstab analyses to evaluate associations between knowledge and behavior across faculties.

### **Results:**

Health Sciences students demonstrated the highest mean AKCT scores ( $33.57 \pm 6.25$ ), while other faculties showed lower but comparable scores. A statistically significant difference in knowledge levels across faculties was observed ( $p < 0.001$ ). Most participants reported using antibiotics based on a doctor's prescription. However, self-medication and reliance on advice from family or friends were still reported among some groups. Higher AKCT scores were generally associated with more appropriate antibiotic-use behavior, although behavioral differences between faculties were not consistently statistically significant.

### **Conclusion:**

Greater knowledge of antibiotics is associated with more appropriate usage behavior. Students in Health Sciences exhibited both higher knowledge and relatively better practices compared to other faculties. These findings emphasize the importance of implementing educational interventions across all academic disciplines to reduce antibiotic misuse and combat the growing threat of antibiotic resistance.

**Keywords:** Antibiotics, Knowledge, Behaviour

**STUDY CODE: PP-22**

## **EVALUATING KNOWLEDGE AND ATTITUDES TOWARD ANTIBIOTIC RESISTANCE: A CROSS-SECTIONAL STUDY AT EASTERN MEDITERRANEAN UNIVERSITY**

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### **Introduction:**

Antimicrobial resistance (AMR) is a primary global public health threat, largely driven by the misuse and overuse of antibiotics. University students represent a critical subgroup for intervention as they frequently access healthcare independently and serve as future professionals who will influence societal antibiotic behaviors. Despite the global scale of AMR, data regarding antibiotic awareness among university students in Northern Cyprus remains limited. Therefore, this study aimed to evaluate the knowledge, attitudes, and behaviors regarding antibiotic use and resistance among undergraduate students at Eastern Mediterranean University (EMU), specifically comparing those in health-related versus non-health-related disciplines.

### **Materials and Methods:**

A cross-sectional, descriptive study was conducted using a structured questionnaire adapted from the World Health Organization (WHO) "Antibiotic resistance: Multi-country public awareness" survey. The research utilized a stratified sample to ensure representation from diverse academic faculties. Quantitative analysis was performed on 369 valid responses to calculate knowledge scores and assess differences between departments. Data analysis was performed using IBM-SPSS version 26. Independent samples t-test and One-Way ANOVA was used for data analysis methods.

### **Results:**

The participant pool had a mean age of  $20.8 \pm 2.0$  years, with females representing 55.9% of the sample. While a majority (71.6%) understood that antibiotic treatment must be completed as prescribed, significant gaps in knowledge were identified. Notably, 70.6% of students incorrectly believed antibiotics are effective against viral infections like the common cold and flu. The overall mean knowledge score was 5.15 out of 12. Statistical analysis revealed no significant difference in knowledge levels between students in health-related (mean = 5.46) and non-health-related departments (mean = 5.03) ( $p = 0.267$ ).

### **Conclusion:**

Misconceptions regarding antibiotic indications are widespread among university students, with academic affiliation in health-related fields providing no significant advantage in awareness levels. These findings highlight that current educational exposure in health sciences may not yet be sufficient to distinguish these students from their peers in non-health fields regarding AMR. There is a critical need for integrated, university-wide educational programs and stewardship initiatives to correct misconceptions and promote responsible antibiotic use across all academic disciplines.

**Keywords:** Antibiotic resistance, University students, Northern Cyprus.

**STUDY CODE: PP-23**

**MONSTERS UNDER THE SHEETS: KNOWLEDGE GAPS AND MISCONCEPTIONS ABOUT BED BUGS AMONG UNIVERSITY STUDENTS**

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**Introduction:**

Bed bugs (*Cimex lectularius*) are re-emerging ectoparasites and a growing public health concern worldwide. Although they are not known to transmit diseases, infestations can cause physical discomfort, psychological stress, and social stigma. Misconceptions, particularly the belief that bed bugs are associated with poor hygiene, remain widespread. This study aims to assess knowledge, awareness, and misconceptions regarding bed bugs among university students.

**Methods:**

A cross-sectional, questionnaire-based study was conducted using an online survey distributed via Google Forms. A total of 210 students from Cyprus International University participated. The questionnaire included sections on demographics, knowledge, personal experience, and management practices. Statistical analysis was performed using chi-square tests and Spearman's correlation, with significance set at  $p < 0.05$ .

**Results:**

Awareness was high, with 88.1% of participants having heard of bed bugs; however, knowledge was limited. Only 8.1% demonstrated very good knowledge, while 52.4% were uncertain about identifying bed bugs. Misconceptions were common, with 52.4% associating bed bugs with poor hygiene. Significant associations were found between demographic factors and hygiene misconceptions ( $p < 0.05$ ). No correlation was observed between travel frequency and knowledge level ( $r_s = 0.008$ ,  $p = 0.907$ ). Although 27.1% reported prior to infestation, misconceptions persisted even among affected individuals. Management practices varied, and reporting rates were low (18.6%).

**Conclusion:**

Despite high awareness, substantial gaps remain in accurate knowledge and identification of bed bugs. Persistent misconceptions and inconsistent management practices highlight the need for targeted educational interventions to improve understanding and reduce stigma.

**Keywords:** Bed bugs; Knowledge; Public health.

**STUDY CODE: PP-24**

## **KNOWLEDGE, ATTITUDES AND PRACTICES REGARDING HEAD LICE AMONG CIU STUDENTS**

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### **Introduction:**

Head lice infestation, caused by *Pediculus humanus capitis*, is a common parasitic condition that primarily affects school-aged children. Although generally harmless, it remains a significant public health concern due to its high transmissibility, particularly in crowded settings such as schools. Misconceptions and stigma surrounding the condition may influence both knowledge and preventive practices.

### **Material and Methods:**

A cross-sectional study was conducted among CIU students using random sampling, with a total sample size of 210 participants. Data were collected using a structured questionnaire. Knowledge was scored on a scale from 0 to 8, with scores above 4 categorized as “good” knowledge. Practice was assessed using a 13-point scale based on correct behaviors. Statistical analysis was performed using Jamovi version 2.6.44. Non-parametric tests, including the Mann–Whitney U test and Kruskal–Wallis test, were applied to examine differences between groups.

### **Results:**

Female participants demonstrated significantly higher knowledge and practice scores compared to males, while no other demographic factors showed significant associations. Participants endorsing stigma toward head lice exhibited lower knowledge and practice scores. Those without a history of infestation had higher practice scores than those who had experienced infestation, despite having similar knowledge levels, suggesting that better practices may reduce occurrence. Overall, a substantial proportion of participants displayed inadequate knowledge and incorrect practices.

### **Conclusion:**

Educational interventions on pediculosis are necessary to improve awareness and promote appropriate practices. Gender differences play a significant role, with males more likely to endorse stigma and demonstrate lower knowledge and practice levels. Furthermore, increased education is associated with more positive attitudes and improved preventive behaviors.

**Keywords:** head lice, knowledge, attitudes