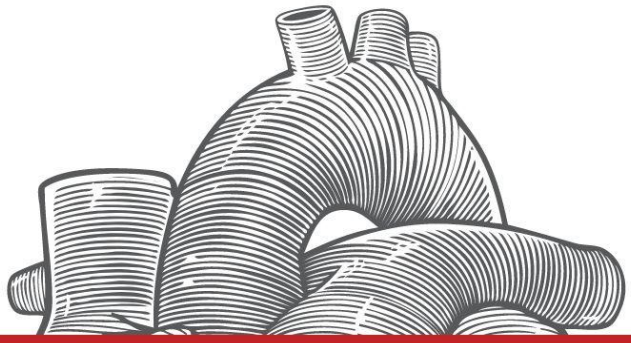
5th

Eastern Mediterranean International Students' Congress & Career Days



Heart & Vessels

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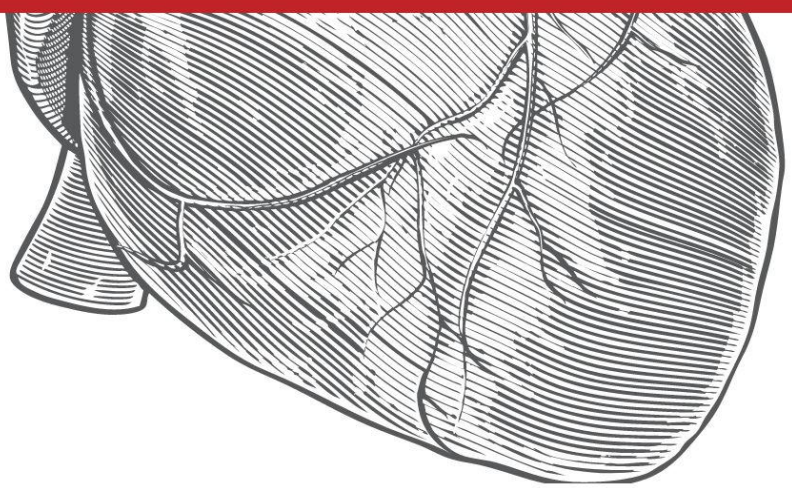

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EASTERN MEDITERRANEAN INTERNATIONALMEDICAL STUDENTS CONGRESS ABSTRACT BOOK

23-24 May 2025

EASTERN MEDITTERANEAN UNIVERSITY FACULTY OF MEDICINE FAMAGUSTA, NORTH CYPRUS

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ORAL PRESENTATIONS

ORAL PRESENTATIONS

POSTER PRESENTATIONS

ABSTRACTS

FOR

ORAL PRESENTATIONS

STUDY CODE: OP01

A RARE CARDIAC ANOMALY: ABERRANT RIGHT CORONARY ARTERY ORIGIN WITH BILATERAL CORONARY ARTERY TO PULMONARY ARTERY FISTULAS

Muhtaroğlu M[1]., Lafci Fahrioğlu S[2*], Yüksel Buğdaycı Ö[3], Lalgailan L[2]. Çetin B.[2] Beton O[3]

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Introduction: The anomalous origin of the right coronary artery from the left coronary aortic sinus is a rare congenital condition. It can usually lead to sudden death or myocardial ischemia at first presentation. Coronary artery fistula is an anomalous communication between the coronary artery and the cardiac chambers or vessels. Coronary artery fistula is a relatively rare anatomic condition of coronary arteries, affecting 0.002% of the general population and accounting for 14% of all coronary artery anomalies. Radiologically advanced methods such as coronary angiography and coronary computed tomographic angiography have been used to diagnose coronary anomalies.

Case Description: We report the case of a 72-year-old male patient who presented with chest pain and dyspnea. Routine angiography showed an anomalous origin of the right coronary artery, and there are two fistulas connecting the diagonal part of the right coronary artery and the left anterior descending artery to the pulmonary artery. Bilateral coronary artery fistulas, which are rarely reported in the literature, are presented in our case as myocardial bridges of the RCA and LAD with the main pulmonary artery, together with the anomalous origin of the right coronary artery.

Discussion:

It is always advisable to have a good knowledge of the anatomy of abnormal vessels, as this will better clarify the approach of the procedures to be applied to the patient. The abnormal origin of the RCA is a potentially fatal congenital condition. Surgical and catheterization procedures can be used to close the fistula. Since coronary angiography helps define the artery of origin, the vessel or recipient chamber, and the site of communication, it is still a gold-standard for diagnosis.

Keywords: coronary artery anomalies, coronary artery fistula, coronary angiography

STUDY CODE: OP02

THE WAY PERSONALITY DIFFERENCES AMONG STUDENTS ARE REFLECTED IN THEIR LEARNING METHODS

Vurğun K., Tuluk İ., Rustom A, Bitmez D.A., Beyaz A.

Aim: This study aimed to explore the relationship between the five major personality traits—openness, conscientiousness, extraversion, agreeableness, and neuroticism—and learning styles (visual, auditory, kinesthetic, and reading/writing) among medical students at different stages of their education.

Methods: A cross-sectional analytical study was conducted with 117 undergraduate medical students from the first, second, and third years at the Faculty of Medicine, Eastern Mediterranean University in North Cyprus. Data collection tools included the Big Five Personality Test (OCEAN) and the VARK questionnaire to assess participants' personality traits and preferred learning styles.

Results: The findings revealed that the kinesthetic learning style was the most preferred among students, showing a significant difference compared to the reading/writing method. Among the Big Five personality traits, agreeableness was the most prominent, while neuroticism scores were also relatively high, particularly among female students. When personality trait levels (low, medium, high) were compared with VARK results, the kinesthetic learning style remained the most preferred across all groups. However, statistical analysis showed no significant association between specific personality traits and learning styles.

Conclusion: This cross-sectional study contributes to the detailed understanding of the interplay between personality and learning, offering valuable insights for educational policy and curriculum development within medical education. Educators can create more effective and inclusive learning environments by recognizing and accommodating the diverse ways in which students process information. The study concludes that agreeableness is the most common personality trait, and neuroticism is the most common personality trait among the medical students at this faculty. It also clearly demonstrates that the most common learning style is kinaesthetic. No significant relationship was detected between personality traits and learning styles. As a result, a stress-free environment in which students can learn by trial and error is the most promising for our research population.

Keywords: Personality traits, Learning styles, Kinesthetic, Neuroticism

STUDY CODE: OP03

A PARTICIPATORY EDUCATION APPROACH FOR CAREGIVERS ON KNOWLEDGE, COMPETENCE AND DAILY MANAGEMENT OF NEUROPSYCHIATRIC PROBLEMS IN CARE CENTERS FOR ADULTS WITH MENTAL DISABILITIES IN NORTHERN CYPRUS

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INTRODUCTION
Neuropsychiatric problems are frequently encountered in care centers for adults with intellectual disabilities, significantly affecting the patients and caregivers. This study aimed to assess the effectiveness of an educational intervention on improving caregivers' knowledge, competence, and daily management skills regarding neuropsychiatric problems, particularly epilepsy, in Northern Cyprus.

METHODS
This educational study was conducted in four neuropsychiatric daycare centers in Northern Cyprus among all caregivers employed at these centers. Training needs were first identified through semi-structured interviews. Then, a participatory, four-stage education program—comprising problem-based learning (PBL), presentations, practice on models, and group work—was delivered. Pre- and post-intervention questionnaires were applied to assess general knowledge, awareness, first-aid practices, and attitudes. Data were analyzed using paired t-tests, and frequency analysis.

RESULTS
Based on the findings of the semi-structured interviews, epilepsy was identified selected as the main topic for the training intervention. A total of 50 caregivers participated in the study. 88% of participants had no prior experience at similar centers, and 64% had never attended an epilepsy-related seminar. Despite this, 84% had previously encountered an individual experiencing an epileptic seizure. The education program primarily increased the percentage of correct responses regarding the triggers, causes, symptoms, and first aid practices related to epilepsy; however, no marked change was observed in the responses to the attitude-related questions.

CONCLUSION
This study highlights that a participatory education model enhances the effectiveness of health-related caregiver education programs, leading to significant gains in knowledge, first-aid skills, and daily management of epilepsy. The findings support the integration of interactive, problem-solving-based education models into caregiver training programs in neuropsychiatric care centers to improve care quality and caregiver competence.

KEYWORDS
Participatory education, epilepsy, caregiver training

STUDY CODE: OP04

EMU FACULTY OF MEDICINE STUDENTS' KNOWLEDGE AND OPINIONS ABOUT ROBOTIC SURGERY IN THE FIELD OF MEDICINE

Burcu B., Sav D., Acay E., Dılkash S., Haçlı K., Kerküklü N.

Introduction:
Robotic surgery has emerged as a transformative advancement in modern medicine, offering enhanced precision, reduced invasiveness, and improved patient outcomes. Despite its growing prevalence in clinical settings, the integration of robotic surgery into undergraduate medical education remains limited. Understanding medical students' knowledge and perceptions of this technology is crucial for informing curriculum development and preparing future physicians for evolving surgical practices. This study aims to assess the knowledge, opinions, and curricular expectations regarding robotic surgery among students at Eastern Mediterranean University Faculty of Medicine.
Methods:
A cross-sectional descriptive study was conducted involving 107 medical students from the first three years at Eastern Mediterranean University Faculty of Medicine. Participants completed a structured questionnaire comprising four sections: demographics, knowledge (8 items), opinions (10 items), and curriculum-related expectations (10 items). Data were analyzed using SPSS with descriptive statistics.
Results:
Among the participants, 58.9% were female, and the majority were first-year students (41.1%). A significant proportion (83.2%) reported no prior experience with robotic surgery. High awareness was observed for certain knowledge items, such as the surgeon controlling the console (97.2%), while only 30.8% correctly identified that robotic surgeries may take longer. In the opinion section, 57.9% agreed that robotic surgery will play a significant role in the future, yet 60.7% felt insufficiently informed. Regarding curriculum expectations, 70.1% supported the inclusion of robotic surgery education.
Conclusion:
Despite limited exposure, medical students demonstrate a strong interest and generally positive attitudes toward robotic surgery. The findings highlight the need for integrating both theoretical and practical components of robotic surgery into medical curricula to better prepare future physicians for technological advancements in surgical practice.

Keywords: Medical education, robotic surgery, survey study

STUDY CODE: OP05

ORGAN-ON-A-CHIP MODELS IN PRECLINICAL DRUG DEVELOPMENT

Authors: Armin Bahrami, Mahtab Mirbolouk, Asim Egitmen.
Faculty of Pharmacy, Cyprus International University

Introduction

In the preclinical periphery of drug development, organ on a chip (OoC) is a captivating tool that can revolutionize pre-clinical studies. It replicates complex tissue microenvironments and promises dynamic biological interactions, allowing for more accurate and ethical alternatives to traditional testing methods. It includes microfluidic platforms and cell cultures and is capable to simulate fluid flow and some even possess biosensors which can monitor certain physiological indices. First OoC was lung-on-a-chip developed by Dr. Donald Huh in 2007 [1]. Since then, extensive research has undergone develop various organs and improve this technology.

Background

Ooc models can be divided into two: single organ-on-a-chip and multi-organ-on-a-chip. There are various single OoCs to cite a few; kidney, liver, heart, brain, lung, gut and skin. Few examples of Multi OoCs worth mentioning include; Liver-heart-on-chip, Liver-Kidney-on-chip and the ultimate goal which is body-on-a-chip (BoC).
They have various advantages. Firstly, they can meticulously measure subtle alterations in tissue and also, they are less costly and time-consuming in comparison to toxicology screening and drug efficacy testing [2-3].
There are few limitations as well. Firstly, these models created so far cannot fully replicate the organ physiology. Also, 3D generation of some complex organs such as inner ear is difficult [4].

Conclusion

Future approaches will develop novel microsystem design and identify new cell sources which will encourage the enhancement of OoC system. The ultimate goal of this technology is development of BoC. To summarize, OoC is a breakthrough in preclinical investigations. It has numerous advantages such as not having ethical issues. Although it has few downsides such as difficulty in generating complex organs, these issues can be resolved as more studies are performed and OoC will redefine the future of pre-clinical studies.

Keywords: Preclinical Drug Evaluation, Organ-on-a-Chip, nanotechnology

STUDY CODE: OP06

COMPARATIVE EFFECTS OF LAVENDER AND ROSEMARY AROMATHERAPY ON MEMORY AND ATTENTION IN YOUNG ADULTS: A RANDOMIZED TRIAL

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Abstract

Background: The olfactory system plays a significant role in modulating cognitive processes such as attention, working memory, and verbal recall. This study explored the comparative cognitive effects of lavender (relaxant) and rosemary (stimulant) essential oils on medical students.

Methods: A randomized two-arm comparative trial was conducted with 30 healthy university students aged 18–25, divided equally into lavender and rosemary groups. Exclusion criteria included medication use, illness, or fragrance sensitivity. Participants completed cognitive tests before and after aroma exposure. Working memory and attention were assessed using the Digit Span Test (forward sequences, 2–9 digits), while verbal learning and recognition were measured via the Hopkins Verbal Learning Test (HVLT), including Immediate Total and Discrimination Index (DI). Essential oils were diffused in a controlled environment 30 minutes prior to testing. Statistical analyses included change scores, and independent samples t-tests were used for statistical comparison.

Results: Lavender aromatherapy significantly improved Digit Span performance compared to rosemary ($p = 0.0017$), indicating enhanced attention and memory span. While the change in Immediate Total HVLT scores did not differ significantly between groups ($p = 0.670$), the Discrimination Index (DI) improved substantially more in the lavender group than in the rosemary group ($p = 0.00006$), reflecting higher memory precision and reduced false recognitions. No significant changes were observed in the rosemary group across both tests, although detailed statistical outputs are pending.

Conclusion: Lavender aromatherapy demonstrated clear cognitive benefits, particularly in working memory and memory accuracy, compared to rosemary. These findings support the potential of non-invasive olfactory interventions, particularly lavender, for cognitive enhancement. Future studies should integrate physiological measures and larger cohorts to further elucidate underlying neurocognitive mechanisms.

Keywords: Aromatherapy; Cognitive performance; Memory enhancement

STUDY CODE: OP07

EVALUATION OF CARDIAC AND INFECTIOUS FINDINGS IN PATIENTS UNDERGOING PERITONEAL DIALYSIS TREATMENT IN NORTHERN CYPRUS: AN AMBIDIRECTIONAL COHORT STUDY

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*Dr. Burhan Nalbantoğlu State Hospital, Department of Nephrology
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Background: Peritoneal dialysis (PD) is a crucial renal replacement therapy for patients with end-stage renal disease.
However, infection-related complications such as peritonitis and catheter-associated infections continue to pose significant clinical challenges.

Objective: This study aimed to evaluate the incidence of infection-related complications and their associations with clinical and biochemical parameters in patients undergoing PD at Dr. Burhan Nalbantoğlu State Hospital.

Methods: An ambidirectional cohort study was conducted including 35 adult patients receiving peritoneal dialysis between January 1, 2024, and March 1, 2025. Retrospective clinical records were used to gather data on demographics, comorbidities, dialysis modality, laboratory values, and cardiac findings. Statistical analyses were performed using SPSS 25.0, applying chi-square tests, t-tests, ANOVA, Pearson's correlation, logistic regression, and survival analysis where appropriate.

Results: In this cohort, peritonitis was documented in 11.4% of patients, increased PAB in 5.71%, and LV hypertrophy in 8.57%, based on echocardiographic findings. Mitral and tricuspid regurgitation occurred in 14.29% of patients. Due to retrospective limitations, data on ESI or tunnel site infections were not available. Among 35 participants, 68.57% were male. Of the 33 with recorded ages, 54.55% were elderly, 27.27% middle-aged, and 9.09% each in youth and senile groups. Hypertension (45.71%) was the most common comorbidity, followed by diabetes (17.14%) and gout (6.67%). Laboratory abnormalities included hemoglobin, electrolytes, CRP, and TSH. No complaints were reported by 37.5% of patients; others experienced muscle or abdominal pain. Peritoneal output positivity was the most common clinical sign (25%). Diagnoses included gout, LFD, eczema, and cervical hernia (25% each).

Conclusions: Infection and cardiovascular complications remain relevant concerns in PD patients. While the low incidence of peritonitis is encouraging, continued monitoring of inflammatory markers and cardiac function is essential. Prospective studies with larger samples are needed to validate these findings and explore predictive factors for adverse outcomes in PD populations.

Keywords: Peritoneal Dialysis, Infection Complications, Cardiac Outcomes

STUDY CODE: OP08

BEYOND BRAIN VOLUME: INTEGRATING WHITE MATTER DISEASE LOAD FOR ENHANCED DIAGNOSIS AND STAGING OF DEMENTIA

Beyza Nur Ateş, Dilay Güleç, Fisun Hocaoğlu, Yasmin Kamkar, Zeynep Özer, Yağmur Topuz
Mentor: Assoc. Prof. Dr. Amber Eker

Introduction / Background: While cortex volume is a recognized marker in dementia diagnosis, emerging evidence supports the clinical utility of white matter hypointensities (WMH). This study evaluates whether integrating WMH burden alongside traditional volumetrics improves early-stage identification and staging of dementia, particularly in the context of APOE ε4 status and clinical comorbidity such as hypertension and Parkinson's disease signs.

Methods: From the OASIS-3 database comprising 1,378 participants, a total of 256 individuals were selected using the G*Power software, forming equally distributed control and dementia groups. Volumetric MRI parameters—including hippocampal volume, white matter hyperintensities (WMH), cortical volume, and intracranial volume—were analyzed in these 256 cases. Statistical analyses were conducted using Independent Samples t-test, Mann-Whitney U test, One-Way ANOVA, Kruskal Wallis test, and Chi-Square test, as appropriate.

Results: Hippocampal volume significantly decreased with cognitive impairment ($p<0.001$). WMH burden was markedly elevated in the dementia group ($p<0.001$) and showed associations with vascular comorbidities. There was no significant differences across both groups for intracranial volume however, the cortex showed a significant difference in which cortical volume was higher in dementia cases .No significant differences were found in gender, race, or education between normal and impaired cognition groups.

Conclusion: Our findings support prioritizing hippocampal volume and WMH volumes in early diagnostic frameworks. WMH may serve as a complementary marker in scoring systems and disease staging. While cortex and ICV remain structurally unchanged in early stages, WMH increases reflect both vascular and degenerative processes.

Keywords: White matter hypointensity, cortex volume, dementia

STUDY CODE: OP09

EMU MEDICAL FACULTY STUDENTS' KNOWLEDGE AND PERCEPTION ON SUSTAINABILITY

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Introduction: Sustainability promises a persistent growth for the populations in need of change for the better and a secure future for the generations to come. Sustainability would only reach its true effects if everyone from each corner of the society starts to work together, thereby creating a great importance and emphasis on the public's own knowledge and preferences regarding sustainability and sustainable actions. This study focuses on understanding the knowledge and perception of sustainability among students at the Eastern Mediterranean University (EMU) Medical Faculty. With increasing global population and waste production, sustainability practices are crucial for preserving ecosystems and promoting long-term well-being.

Methods: A descriptive cross-sectional survey was conducted during the 2023-2024 academic year, targeting 117 medical students at EMU. The study used a 25-question questionnaire designed by the researchers, covering participants' approaches to sustainability, their practices, and the impact of recycling on environmental sustainability. Data collection involved physical surveys and data analysis was performed using Microsoft Excel and SPSS for statistical evaluations.

Results: With a response rate of 81.2% (95 people), the findings of this study show that environmental sustainability knowledge among medical students as well as understanding of sustainable actions was recorded highest, 80%. Knowledge on ecological footprint was also recorded high, 73%, unlike preferences on sustainable actions which was recorded as the lowest among medical students in this faculty, 60%.

Conclusion: Sustainability and sustainable actions knowledge was high in contrast to sustainable actions taken in daily life showing that even though medical students know about sustainability they don't apply it as much in their daily lives. This brings the question of how to tackle it and whether policies by authorities can help incentivize people to take more sustainable actions.
Keywords: sustainability, sustainability knowledge and actions, medical students.

STUDY CODE: OP10

RAMADAN-ASSOCIATED DRY INTERMITTENT FASTING: EFFECTS ON URINARY BIOMARKERS IN UNIVERSITY STUDENTS

Keziban Çelikkanat[1], İdal Kutluhan[1], Hayrunisa Tunçer[1], İlke Duruk[1], Gracious Georges Meingarrai[1], Arda Mevlana[1], Çağla Şafak[2], Kerem Teralı[1], Akıle Tuncal[1]

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Introduction: Urinalysis with multi-parameter reagent strips is a widely used, non-invasive method to assess hydration status, renal function, and basic metabolic health. These strips measure several biochemical and cellular parameters that reflect physiological changes under different conditions. Dry intermittent fasting, which involves abstaining from both food and fluids for set periods, may influence these parameters through shifts in hydration and metabolism. Ramadan fasting, a notable form of dry intermittent fasting observed from dawn to sunset by millions of Muslims, offers a natural model for investigating these effects. However, limited data exist on how such fasting impacts urinalysis findings in healthy young adults.

Methods: This cross-sectional study compared urinary biomarkers between fasting and non-fasting university students. Voluntary participants from Cyprus Health and Social Sciences University were categorized accordingly. Urinalysis assessed pH, specific gravity, protein, glucose, ketones, and additional markers. Lifestyle factors, such as alcohol consumption, smoking, chronic disease status, medication use, and physical activity, were documented via structured questionnaires.

Results: Among 209 participants (51.7% female), 43.5% reported fasting during Ramadan. Urinalysis was conducted on 172 students. Common abnormal findings included microscopic hematuria (43.0%), leukocyturia (27.9%), proteinuria (7.6%), and bilirubinuria (7.6%). Only 0.6% tested positive for glucose or nitrites. Urine pH differed significantly between groups ($p = 0.001$), with more acidic urine (pH = 5) among fasting individuals. Specific gravity also showed significant variation ($p = 0.041$), with elevated levels (≥1.03) more common in fasting participants, suggesting mild dehydration. No significant differences were found in other parameters.

Conclusions: Dry intermittent fasting may influence urine pH and specific gravity, reflecting shifts in hydration and acid-base status. Most other markers remained within normal limits, supporting the short-term safety of Ramadan fasting in healthy individuals. Urinalysis strips may be a practical tool for monitoring fasting-related changes.

Keywords: urinalysis, intermittent fasting, hydration status

STUDY CODE: OP11

DOWN- AND UP-REGULATION OF WNT/ B-CATENIN PATHWAY GENES VENOUS INSUFFICIENCY PATIENTS

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Introduction
The Wnt/β-catenin signaling pathway plays a crucial role in tissue homeostasis and has been identified as a key regulator in embryonic cardiac and vascular development. However, the specific contribution of β-catenin pathway genes to vascular development remains unclear. The absence of these genes has been associated with fragile vascular structures. This study aims to investigate the expression of key Wnt/β-catenin pathway genes—AXIN2, APC, DVL1, and CTNNB1—in patients with varicose veins to better understand their role in venous insufficiency.

Methods
This was an observational gene expression study conducted to compare the expression levels of WNT/β-catenin pathway genes between varicose vein patients and control subjects. A total of 113 great saphenous vein samples were collected from two groups: Venous insufficiency group: patients diagnosed with varicose veins

Control group: patients undergoing coronary artery bypass graft (CABG) surgery
The independent variable was the disease status (venous insufficiency vs. control), and the dependent variables were the expression levels of the target genes (AXIN2, APC, DVL1, CTNNB1). RNA was extracted from the vein tissue samples and analyzed using quantitative PCR (qPCR) to determine gene expression profiles. Statistical analyses were conducted to compare gene expression levels between groups, with p-values < 0.05 considered statistically significant.

Results
The analysis revealed that AXIN2 expression was significantly upregulated in varicose vein patients ($p = 0.0015$). While APC gene expression was significantly different between CABG patient group and varicose vein control group with (p-value = 0.023).In contrast, CTNNB1 and DVL1 did not exhibit statistically significant changes in expression between the groups.

Conclusion
This study identifies AXIN2 as a gene significantly associated with varicose vein pathology and suggests that APC may also play a regulatory role. The APC gene was also significantly higher in control group. There have been limited studies specifically investigating the role of the APC gene in veins. This is also the first study to investigate the role of APC gene in venous insufficient patients, therefore further studies will be essential to evaluate the exact role of the APC gene in this disorder.

Keywords: WNT/β-catenin pathway, gene expression, venous insufficiency

STUDY CODE: OP12

CLINICAL OUTCOMES OF DIABETIC AND NON-DIABETIC PATIENTS ON MAINTENANCE HEMODIALYSIS IN DR. BURHAN NALBANTOĞLU STATE HOSPITAL IN NICOSIA, TRNC

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Introduction: Hemodialysis is a machine that works as an artificial kidney by removing waste products, fluids, and salts. It is applied to patients who have end-stage renal disease with a glomerular filtration rate below 15 mL/min/1.73 m^2. This study aims to determine clinical profiles, outcomes, and characteristics of diabetic and non-diabetic patients in Dr. Burhan Nalbantoğlu State Hospital, Nephrology Department.

Materials and Methods: A retrospective cohort study was conducted among patients on maintenance hemodialysis, with a sample size of 30. The dependent variables: laboratory results, characteristics, cause of dialysis, comorbidities and complications, were compared between independent variables, diabetic and non-diabetic patients. In terms of specific objectives, the progression of patients' laboratory results was examined according to their treatment phase and diabetic status. Each phase is equivalent to 1 complete year where the first phase represents the initial year of treatment; the third phase is the final year of treatment, and the second phase is the median year of treatment. For the evaluation of statistical data, Mixed ANOVA, the Mann-Whitney U test, and the paired t-test are used. Additionally, the chi-square test of independence and relative risk was used for the evaluation of characteristics, causes, and outcomes (death and CVD), respectively.

Results: Considering the complications, being diabetic increases the risk for CVD with a relative risk of 1.44, while diabetic patients are 1.19 times more likely to die. In terms of laboratory results, only glucose values showed a significant difference between diabetic and non-diabetic patients. There is little or no progression among each treatment phase for glucose values among patients. Additionally, creatinine values have a significant difference between phase 1 and phase 3, and phase 1 and phase 2.

Conclusion: There is a significant difference between diabetic and non-diabetic patients on maintenance hemodialysis considering the outcomes.

Keywords: hemodialysis, diabetic versus non-diabetic, clinical outcomes.

STUDY CODE: OP13

THE ASSESSMENT OF HEALTH ANXIETY DISEASE AMONG STUDENTS OF EMU FACULTY OF MEDICINE

Authors: Yangın D., Ekici A., Özkan R., Keskinbakış A. Taş M.

Abstract

Introduction

Health anxiety is a common experience for medical students, often linked to what is known as Medical Student Syndrome (MSS). Constant exposure to medical information can make students overly sensitive to physical symptoms and worry excessively about serious illnesses. Although this phenomenon is recognized, there's still a lack of detailed research on what contributes to it and how it affects students in their learning environment.Study set out to explore how widespread health anxiety is among medical students at EMU, and what factors may influence it. The research focused on potential links between health anxiety and students' GPA, gender, study routines, family history of anxiety, existing health conditions, year of study, and specific aspects of health anxiety, such as worry, fear, reassurance-seeking, and their impact on daily life.

Methods:

Total of 110 medical students at EMU took part in the study by completing a structured questionnaire and a 21-item Health Anxiety Assessment. The data were analyzed using descriptive statistics, Pearson correlation, ANOVA, and group comparisons with SPSS.

Results:

Participants showed a moderate level of health anxiety overall (M=19.76, SD=12.13), with some students scoring notably higher. No significant link was found between GPA and anxiety. However, anxiety levels did vary significantly by gender, study hours, family history, and medical diagnoses. Students studying longer hours or with a background of anxiety or illness reported higher scores. Although anxiety levels shifted across academic years, the difference was not statistically significant. The most affected areas were health worries and seeking reassurance.

Conclusion:

Health anxiety is notably present among EMU medical students, shaped by personal and lifestyle factors rather than academic success. These findings highlight the need for supportive mental health initiatives tailored to the unique pressures of medical training.

Keywords:

Health anxiety, Medical Student Syndrome (MSS), medical students

STUDY CODE: OP14

KNOWLEDGE AND ATTITUDES TOWARDS SEXUALLY TRANSMITTED DISEASES AMONG UNDERGRADUATE STUDENTS AT EMU

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Introduction: Sexually Transmitted Diseases (STDs) are transmitted via microorganisms through unprotected sexual activity, vertical transmission, and so on. This study aims to determine the knowledge and attitudes of undergraduate university students at Eastern Mediterranean University (EMU) regarding STDs.

Materials and Methods: A cross-sectional study was conducted to identify students with and without knowledge of STDs, with a sample size of 710. The dependent variables were determined as knowledge and attitudes towards STD, whereas gender, faculty type, grade, and nationality were determined as independent variables. The survey was adapted from the validated study, which includes questions for demographics, assessing knowledge, attitude, and preventative measures. Mann-Whitney U test, Kruskal-Wallis test, and Spearman's Rank Correlation Coefficient test were used.

Results: According to the p-values, the knowledge and attitude scores are affected by gender, faculty type, and nationality, while the grade of students does not have any significant effect on the knowledge score of STDs. Health students have a higher median value in both scores than non-health students. Likewise, females have higher knowledge and attitude scores than males. Year 2 and 3 students have the highest knowledge score, while Year 4 students have the highest attitude score. Additionally, Turkish students have the highest knowledge and attitude scores. Furthermore, 14.9% of the students have good knowledge about STDs, and 13% have a good attitude towards STDs. Considering preventative practice, 10.1% have an acceptable preventative practice against STDs. There is a weak positive correlation between age and both knowledge ($r = +0.023$) and attitude towards STDs ($r = +0.039$). Likewise, knowledge and attitude toward STDs have a weak positive correlation with each other ($r=+0.393$).

Conclusion: There is a significant difference between independent variables and knowledge and attitudes towards STDs, except grade of the students. To conclude, the undergraduate students at EMU should be informed and acknowledged of STDs and their effects.

Keywords: STD, level of knowledge, and attitudes towards STDs.

STUDY CODE: OP15

THE RELATIONSHIP BETWEEN SEDENTARY BEHAVIOR AND PHYSICAL HEALTH: A CROSSSECTIONAL STUDY ON GOVERNMENTAL OFFICE EMPLOYEES IN NORTH CYPRUS

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Mentor: Assist. Prof. Dr. Nimet İlke Akçay

Introduction / Background

Sedentary behavior (SB), characterized by prolonged sitting with low energy expenditure, is increasingly recognized as an independent health risk, particularly among office workers. This study aims to investigate the prevalence of musculoskeletal discomfort and perceived health risks linked to prolonged sitting among governmental office employees in North Cyprus.

Methods

This descriptive cross-sectional study included 358 participants randomly selected from governmental offices. Data were collected via paper-based questionnaires, including demographic questions, the Leisure-Time Physical Activity Questionnaire (LTPAQ), and the Cornell Musculoskeletal Discomfort Questionnaire (CMDQ). Statistical analyses were performed using IBM SPSS v26 with significance set at $p<0.05$.

Results

Of the participants, 62% were female, and the median sitting time was 6 hours per day. Neck and lower back pain were the most common complaints, reported by 27.9% and 19.1% respectively. CMDQ scores were significantly higher among females, older individuals, and those dissatisfied with their ergonomic setup ($p<0.05$). LTPAQ revealed that over 56% of participants were insufficiently active regardless of work experience or daily sitting hours.

Conclusion

This study confirms a strong association between sedentary behavior and increased musculoskeletal discomfort, particularly in the neck and lower back. Ergonomic modifications and strategies to interrupt prolonged sitting are essential to mitigate these occupational health risks.

Keywords

Sedentary behavior, musculoskeletal discomfort, ergonomic risk, office workers,

STUDY CODE: OP16

EVALUATING THE DIAGNOSTIC ACCURACY OF THE TSH/FT4 RATIO ACROSS THYROID DISORDERS

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Aim: This study aimed to assess the diagnostic utility of the TSH/FT4 ratio in differentiating between various thyroid function statuses using a large sample from selected online database. The objective was to evaluate the distribution, statistical differences, and diagnostic accuracy of this ratio to support clinical decision-making.

Subjects and Methods: A total of 1,359 individuals were categorized into five thyroid function groups: overt hyperthyroid, overt hypothyroid, subclinical hyperthyroid, subclinical hypothyroid, and euthyroid. Non-parametric statistical tests, including the Kruskal-Wallis and Mann-Whitney U tests, were employed due to violations of normality. ROC curve analyses were performed to determine the sensitivity, specificity, and area under the curve (AUC) of the TSH/FT4 ratio in differentiating thyroid states.

Results: Significant differences in TSH/FT4 ratio were observed between all thyroid function groups ($p < 0.001$), with overt hypothyroid patients exhibiting the highest ratios and overt hyperthyroid patients the lowest. ROC analyses revealed excellent diagnostic accuracy in multiple classifications, with AUC values ranging from 0.692 to 0.997. The highest discriminative power was observed between overt hypothyroid and euthyroid groups (AUC = 0.997).
Conclusion: The TSH/FT4 ratio demonstrates strong discriminatory capacity across thyroid dysfunction types and holds promise as a reliable diagnostic indicator. Non-parametric analyses validated significant intergroup differences, underscoring the ratio's potential role in clinical evaluation protocols.
Keywords: TSH/FT4 ratio, thyroid dysfunction, diagnostic accuracy

ABSTRACTS

FOR

POSTER PRESENTATIONS

STUDY CODE: PP01

SGLT2 INHIBITORS IN CARDIOVASCULAR HEALTH: EMERGING TRENDS AND IMPACT

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Introduction / Background
Sodium-glucose cotransporter-2 (SGLT2) inhibitors were originally developed to help manage blood sugar levels in people with type 2 diabetes. They have become a cornerstone therapy in cardiovascular and renal diseases. Clinical evidence supports their use in reducing cardiovascular morbidity and mortality, even among individuals who don't suffer from diabetes. This review investigates the pharmacological mechanisms, clinical outcomes, and growing therapeutic applications of SGLT2 inhibitors in cardiovascular health.

Methods
A precise search across PubMed, Scopus, Web of Science, and Google Scholar was carried out without applying a date filter. The identified studies were clinical trials, meta-analyses, and mechanistic studies concentrating on the cardiovascular and renal impacts of SGLT2 inhibitors. Articles were compiled through keyword searches. After meticulously examining the studies, this review included 15 articles. Primary focus was given to the pharmacodynamics, clinically relevant changes, and health policy considerations of the findings.

Results
SGLT2 inhibitors carry out their cardioprotective functions through mechanisms such as glycosuria, natriuresis, and reduction of insulin sensitivity, as well as decrease in blood pressure, whilst augmenting myocardial energetics through ketone body metabolism. These mechanisms decrease sympathotonicity, afterload and preload, remodel the heart, and enhance its efficiency. Restoration of tubuloglomerular feedback, reduction of intraglomerular pressure, and inhibition of inflammatory mediators describe the mechanism for the Renoprotective action. All these mechanisms, together, prevent an exacerbated and unrestrained rise in heart failure along with other cardiovascular complications, and the progression of CKD in patients from different backgrounds. Under-prescription, economic constraints, and therapeutic stagnation delay the clinical application of these approaches. Combining AI and predictive methodologies creates tailored solutions and offers a new frontier for optimal therapeutic stratification.

Conclusion
The development of SGLT2 inhibitors represents a paradigm shift in medical therapy with extensive cardiovascular and renal ramifications. Their multifaceted actions warrant new clinical guidelines, fair healthcare policies, ongoing assessment of chronic effects, multiclass drug interactions, and tailored medicine strategies.

Keywords: Sodium-Glucose Transporter 2 Inhibitors; Cardiovascular Diseases; Heart Diseases

STUDY CODE: PP02

BRIDGING KNOWLEDGE: A BICOMMUNAL STUDY OF CLIMATE CHANGE PERCEPTIONS, ATTITUDES, AND HEALTH IMPACTS WITHIN ENVIRONMENTAL ORGANIZATIONS IN CYPRUS

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Introduction
Climate change poses escalating health risks globally, including heat stress, vector-borne diseases, and respiratory conditions. Cyprus, with its semi-arid climate and divided political context, presents unique vulnerabilities. This study explores knowledge and awareness of climate-related health impacts among members of environmental organizations from both Greek Cypriot and Turkish Cypriot communities.

Methods
A bicommunal, cross-sectional survey is being conducted using a cluster sampling approach. Participants are recruited through group chats of 48 environmental civil society organizations listed in the Civic Space database. An online bilingual questionnaire (English and Turkish) assesses respondents' knowledge, perceived obstacles, and attitudes toward climate-health issues and bicommunal cooperation. Descriptive statistics and Chi-square tests will be used for analysis.

Results
Data collection is currently ongoing. Preliminary engagement suggests high interest among environmental organization members. Full analysis will explore knowledge gaps, perceived challenges, and differences across communities to inform community-focused climate-health strategies.

Conclusion
Findings from this study aim to inform targeted educational strategies, support bicommunal collaboration, and contribute to policy recommendations aligned with the European Union's Fit for 55 and Grand Transition frameworks. By highlighting the intersection of health, climate, and community engagement, the research aspires to enhance public resilience and promote equitable environmental advocacy across divided communities in Cyprus.

Keywords
Climate change, Health awareness, Cyprus

STUDY CODE: PP03

POST-DISASTER HEALTHCARE ROLES OF MEDICAL STUDENTS: A CROSS-SECTIONAL STUDY

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Introduction
Medical students can potentially be a support workforce in a disaster setting due to their enthusiasm to help and the need for surge capacity. The aim of this study is to assess their knowledge, self-efficacy, and disaster response preparedness.

Methods
A cross-sectional study was conducted among first- to third-year medical students at Eastern Mediterranean University using a self-reported questionnaire. The questionnaire included open- and closed-ended questions assessing attitudes, disaster experience, formal education, and perceived challenges. Descriptive statistics and thematic analysis were employed to analyze the data.

Results
A total of 94 medical students participated in the study, with a mean age of 20.6 (range:g 19–24). Of the participants, 63.8% (n=60) were female, 34.0% (n=32) male, and 2.1% (n=2) preferred not to disclose their gender. In terms of academic year, 42.6% (n=40) were first-year, 28.7% (n=27) second-year, and 28.7% (n=27) third-year students. A total of 39.4% (n=37) had experienced a natural disaster, and 40.9% (n=38) were familiar with ways to help afterward. Regarding willingness to help during disasters, 40.4% (n=38) would help regardless of the situation, while 38.3% (n=36) had conditional willingness. The main barriers to participation were lack of training (47.9%, n=45), safety concerns (38.3%, n=36), fear of incompetence (30.9%, n=29), and stressful working conditions (18.1%, n=17).

Conclusion
Medical students are moderately ready for health roles in the event of disasters, with desire to take up administrative, education, and psychological functions. Issues related to safety and competency suggest a need for organized training, mentoring, and drills to ready them and increase confidence.

Keywords: Disaster response, medical students, emergency educatio

STUDY CODE: PP04

PREVALENCE OF OBSESSIVE-COMPULSIVE DISORDER AND ITS ASSOCIATION WITH ANXIETY AMONG MEDICAL STUDENTS IN EMU

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Introduction

Obsessive-Compulsive Disorder (OCD) is defined by recurring, unwanted thoughts (obsessions) and repetitive behaviors (compulsions) that can cause severe distress and interfere with daily functioning. The objective of this study is to take a look at the prevalence of OCD among medical students in our faculty, explore how it correlates with anxiety triggers, and enhance awareness of OCD symptoms. This understanding can help with early detection and treatment, ultimately increasing the well-being of those affected.

Material and Methods

Printed questionnaires containing 34 questions were distributed to phase 1 medical students (1st-3rd year) face to face, with a target population of 169 and a sample size of 117.
The survey asked about demographics, lifestyle factors triggering anxiety, and OCD symptoms using the Dimensional Obsessive-Compulsive Scale (DOCS). The data was collected, anonymised, and analyzed with SPSS and Microsoft Excel. Every participant provided informed consent.

Results

Among the 73 students that participated in this study, 56 of them (76.6%) have the potential or are at risk to develop OCD. Also the majority of students who have a high caffeine or alcohol consumption show to be more likely to be at risk for developing OCD.

Conclusion

This study reveals a high prevalence of OCD among medical students of our faculty, with 76.6% of the participants exhibiting potential OCD symptoms. These findings highlight the heightened awareness of contamination and hygiene among medical students, contributing to increased OCD severity.

Keywords: Obsessive-Compulsive Disorder (OCD), Anxiety, Medical Students, Survey, Dimensional Obsessive- Compulsive Scale (DOCS).

STUDY CODE: PP05

EVALUATION OF TEICOPLANIN AND AMIKACIN COMBİNATION: EFFECTS ON Lİ-MRSA ISOLATES: AN IN VITRO EXPERİMENTAL STUDY

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Introduction

Linezolid-resistant *Staphylococcus aureus* (LRSA) has emerged as a significant clinical concern, particularly within the context of methicillin-resistant *S. aureus* (MRSA) infections. First identified in 1999 during a hospital outbreak in Spain, LRSA complicates treatment by limiting therapeutic options and increasing the risk of failure. Resistance is primarily driven by mutations in the 23S rRNA gene—especially the G2576T mutation—and the acquisition of the cfr methyltransferase gene.

Although linezolid remains an effective treatment for several resistant *Staphylococcal* infections due to its oral bioavailability and favorable safety profile, prolonged use has contributed to LRSA development. As a result, alternative antibiotics such as **amikacin** and **teicoplanin**, with distinct mechanisms targeting protein synthesis and cell wall formation respectively, are under investigation.

This study evaluates the potential synergistic activity of amikacin and teicoplanin against LRSA strains, aiming to identify more effective therapeutic strategies for combating this increasingly resistant pathogen.

Methods

Ten LRSA isolates were subjected to antimicrobial susceptibility testing using Kirby-Bauer disk diffusion, broth microdilution for MIC determination, and the double disk diffusion method to assess synergistic interactions. The susceptibility interpretations followed EUCAST 2024 guidelines.

Results

All LRSA isolates were found to be susceptible to both teicoplanin and amikacin individually. MIC values for both antibiotics were significantly below resistance thresholds. However, no synergistic interaction was observed in the double disk diffusion test for any isolate, despite slight enhancement in inhibition zones in a few cases.

Conclusion

While teicoplanin and amikacin retain strong individual efficacy against LRSA isolates, their combination did not demonstrate confirmed synergistic effects via double disk diffusion testing. Further studies employing more sensitive methods such as checkerboard assay, time-kill studies, or fractional inhibitory concentration index (FICI) analysis are recommended to explore the full potential of this antibiotic combination.

Keywords

Linezolid-resistant *Staphylococcus aureus*, synergy, antimicrobial resistance

STUDY CODE: PP06

GENE THERAPY AND GENE THERAPY PRODUCTS INTRODUCED TO MARKET BY 2022

Elaheh Ashrafian Bonab

Introduction
Gene therapy has revolutionized the concept of treating genetic disorders by addressing the root causes at the genetic level, becoming one of the most quickly evolving fields in medicine today, especially due to its long-term effects. Gene therapy for the treatment of diseases relies on strategies of gene suppression, overexpression, and editing using different tools such as CRISPR and RNA interference.

Material and Methods
The gene transfer methods are broadly classified into three categories: physical, chemical, and biological. The use of viral vectors, such as adenoviruses, retroviruses, and adeno-associated viruses, is prevalent in clinical settings due to their high efficiency.

Results
Safety remains as an issue, and risk mitigation strategies will continue to evolve from clinical data to minimize complications related to gene silencing and immunotoxicity. In this review, various aspects of gene therapy have been covered, such as in-vivo and ex-vivo gene therapy, gene transfer methods, safety issues, as well as the gene therapy products approved until 2022. This review lists 35 licensed gene therapy products, detailing their therapeutic uses, mechanism of action, and vectors employed.

Conclusion
Each product illustrates the various applications and potentials of gene therapy against untreatable conditions. Continuous improvements in gene transfer methods, vector safety, and clinical applications will increase the impact of the technology and offer hope for effective treatment and possible cures for different genetic disorders.
Keywords: Gene therapy; gene therapy products; gene transfer; genetic disorders; vectors.

STUDY CODE: PP07

COMPREHENSIVE ASSESSMENT OF PHYSICAL, COGNITIVE, AND EMOTIONAL DEVELOPMENT IN ELEMENTARY SCHOOL STUDENTS: A CROSS-SECTIONAL STUDY IN FAMAGUSTA, NORTH CYPRUS

Introduction

A child's overall development is shaped by physical growth and health, which influence cognitive and emotional resilience, and this study evaluates these factors and developmental milestones in first-grade students in Famagusta, North Cyprus. The main research question is: "How do physical health, cognitive abilities, and social-emotional factors interact to shape the development and well-being of young students?" The purpose is to give parents, educators, and healthcare professionals useful guidance for early detection of health or learning issues and to promote balanced development.

Materials and Methods

The study was conducted during the 2023-2025 academic years, involving eight schools in Famagusta. The physical health assessments were done on height, weight, and BMI measurements and compared against CDC growth charts. The Strengths and Difficulties Questionnaire specified to age assessed emotional, social, and behavioral states with definite subscales. In addition, parent and teacher feedback considering the children was taken for detailed assessment. Data were analyzed using SPSS to identify risk groups (e.g., obesity, ADHD, learning disabilities) and evaluate correlations between variables.

Results

Most of the 195 first-year primary school students in Famagusta had a BMI within the normal range (59.6%), while 9.3% were underweight, 10.6% were overweight, and 20.5% were classified as obese. Moreover, only 2.5% of students had a formal ADHD diagnosis, while teachers reported suspicion in 32 cases. In addition, the accessible SDQ data showed that 56.4% of the students were categorized as "Close to Average". However, a portion of the participants displayed varying levels of concern: 21.5% were categorized as "Slightly Raised," 13.3% as "High," and 8.7% as "Very High".

Conclusion

In conclusion, while most first-year primary school students had a normal BMI and typical behavioral scores, notable rates of obesity, suspected ADHD, and elevated SDQ concerns highlight the need for early screening and support interventions.

STUDY CODE: PP08

THALASSEMIA AWARENESS AMONG UNIVERSITY STUDENTS

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Introduction
Thalassemia is an inherited blood disorder characterized by a deficiency in the formation of hemoglobin. Patients with thalassemia may suffer from different levels of anemia, a condition without healthy red blood cells to meet the body's oxygen needs. Thalassemia once represented a significant health burden in North Cyprus, with approximately 18 to 20 affected births reported each year. To address this issue, premarital screening for thalassemia carriers was made compulsory by law in 1980. Further efforts to reduce incidence were implemented with the introduction of prenatal diagnostic services in 1984, resulting in a marked decrease in the number of affected births. Between 1991 and 2001, only five infants with thalassemia were born, and there have been no reported cases since.

Methods
Our study specifically targeted assessing the awareness levels among 150 university students. The study used a structured questionnaire of Hossain J, et al., with sections on demographics, ten knowledge questions, and ten attitude questions about thalassemia. The respondents were asked if they knew about thalassemia treatment and the screening process.

Results
While students' knowledge levels about thalassemia did not differ significantly based on gender ($p = 0.643$) or marital status ($p = 0.241$), a statistically significant difference was found depending on whether their field of study was health-related ($p = 0.000$). However, it was observed that 82.31% of participants had a positive attitude of the "Premarital Screening" conducted to prevent thalassemia.

Conclusion
Knowledge of thalassemia and the importance of premarital screening in preventing the disease was assessed. The results underscore the importance of education and awareness in promoting thalassemia prevention and management, emphasizing the need for targeted approaches to targeted populations.

Keywords: thalassemia, awareness, university student

STUDY CODE: PP09

ENDOCRINE METABOLISM VIA MACRONUTRIENT-INDUCED INSULIN RESPONSE: A DATA ANALYSIS ACTIVITY FOR PHYSIOLOGY EDUCATION

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Aim: Due to regulatory and logistical challenges, traditional hands-on endocrine labs can be difficult to implement. Here, we provide a flexible, dry-lab data-analysis activity that eliminates the need for direct blood sampling and instead focuses on teaching analytical skills and theoretical knowledge. This article presents a dry-lab/classroom-ready dataset and teaching approach that allows students to analyze the endocrine regulation of metabolism following the consumption of foods predominantly composed of fat, protein, or carbohydrates. By examining real data on blood glucose and insulin responses, students gain a deeper understanding of how macronutrient intake influences metabolic pathways.

Methods & Data: A pilot set of data (originally collected with appropriate ethical approval) is provided, showing blood glucose and insulin levels from 15 participants randomly assigned to consume a food primarily composed of either fat, protein, or carbohydrates. This dataset is intended for in-class data analysis, where students predict and interpret changes in blood glucose and insulin using statistical tests.

Results: Postprandial glucose and insulin levels increased most dramatically after carbohydrate intake, whereas protein and fat intake produced more modest with minimal insulin changes. These findings align with expected endocrine responses and provide a rich dataset for student exploration of metabolic regulation.

Conclusions: Shifting from direct laboratory work to data-driven classroom analysis offers an accessible way to teach endocrine metabolism. By using real-world data, students can practice experimental design skills, interpret statistical findings, and better understand how diet influences blood glucose and insulin levels.

Keywords: Data-analysis activity; Endocrine control; Insulin response; Macronutrient metabolism; Medical education; Blood glucose

STUDY CODE: PP10

ACCESS TO REPRODUCTIVE HEALTH SERVICES AMONG EASTERN MEDITERRANEAN UNIVERSITY STUDENTS: PRELIMINARY RESULTS FROM HEALTH-RELATED FACULTIES

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Introduction
Access to reproductive health services (RHS) plays a vital role in the well-being of university students. However, many young adults face barriers such as limited awareness, cultural norms, and stigma that hinder their ability to utilize these services. This study aimed to evaluate the accessibility of RHS among students at Eastern Mediterranean University (EMU), identify existing barriers, and gather suggestions for improvement.

Methods
A descriptive cross-sectional study was conducted using a self-administered questionnaire available in both English and Turkish. Participants were recruited from four health-related faculties: Medicine, Health Sciences, Dentistry, and Pharmacy. The questionnaire assessed demographics, awareness, access to RHS, perceived barriers (e.g., stigma, privacy, logistics), and suggestions. Ethical approval was obtained, and informed consent was collected from all participants. Data were analyzed using descriptive statistics to identify trends in awareness and accessibility.

Results
Among the 61 students surveyed in health-related faculties, 82% reported not knowing where or how to access RHS at the university, and 59% had never attempted to use such services. While 64% indicated some prior knowledge of RHS, this information was mainly acquired through educational sources (67%), internet sources (67%), and informal networks such as family or friends (59%). These findings highlight a gap between general awareness and actual utilization of RHS.

Conclusion
Preliminary findings suggest that most students lack awareness of how to access reproductive health services at the university, indicating significant barriers to effective utilization. To bridge this gap, universities should enhance communication strategies, improve visibility of available services, and consider integrating reproductive health education into student support programs.

Keywords: University Students, Access, Reproductive Health Services

STUDY CODE: PP11

GUT MICROBIOME DYSBIOSIS AND PHAGE-ASSOCIATED SHIFTS IN ALZHEIMER'S DISEASE MOUSE MODELS

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Introduction

Alzheimer's disease (AD) has been increasingly associated with systemic changes beyond the borders of the central nervous system, with particular reference to the gut microbiome. Recent reports have shown that microbial dysbiosis can promote neuroinflammation through the gut-brain axis. The current study explores contrasts in the gut microbiota of wild-type (WT) mice and those with an Alzheimer's model (AD) through 16S rRNA amplicon sequencing with functional annotation. We also analyzed taxonomic differences and explored the possible viral (phage) components within the gut microbiome and their role in microbial dynamics.

Methods

Fecal samples from both AD and WT mice were processed for 16S rRNA gene amplicon sequencing. Quality control was performed first using FastQC and then subsequent filtering and trimming. Taxonomical classification was then performed using Kraken2, while microbe abundance data was represented using bar plots and heatmaps. Differential abundance analysis compared taxa among the various groups. Functional annotation of the obtained contigs using eggNOG and Pfam helped facilitate the identification of phage-related proteins as well as their associated GO and KEGG terms.

Results

Sequencing of fecal samples from AD and WT mice produced high-quality reads but with significant bias in GC content and overrepresentation of specific sequences. Taxonomic analysis revealed disparate microbial profiles: WT mice had higher levels of Muribaculum and Alistipes, while AD mice had an increased abundance of Faecalibaculum and
Lactobacillus. Heatmaps of differential abundance supported a distinct separation of the two groups. Functional annotation showed an abundance of phage-related protein representation in AD samples, implicating a potential role for bacteriophage activity in shaping the Alzheimer's disease-associated microbiome.

Conclusion

The analysis reveals distinct differences in the gut microbiome of AD and WT mice, both taxonomically and functionally. Viral components are controlled by bacteriophage proteins that, in turn, signal their involvement in disease and changes in the microbes through the gutbrain axis. This emphasizes the significance of the modulation of the gut microbiome in neurodegeneration and the phage-host interactions in Alzheimer's disease.

Keywords: Gut Microbiome, Alzheimer's Disease, Metagenomics, Bioinformatics.

STUDY CODE: PP12

PERCEIVED STRESS, PHYSICAL SYMPTOMS, AND ASSOCIATED LIFESTYLE FACTORS IN UNIVERSITY STUDENTS

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Inroduction

University students frequently encounter psychological stressors. Prolonged exposure to stress can manifest in psychosomatic symptoms, impacting both physical and mental well-being. This study examines the association between perceived stress levels and the prevalence and intensity of these symptoms among undergraduate students at Eastern Mediterranean University (EMU).

Material and Methods

A cross-sectional, questionnaire-based study was conducted during the 2024–2025 academic year, we are presenting preliminary results from health faculties only, which include 99 questionnaires.Data collection tools included: Demographic and lifestyle characteristics (age, gender, sleep patterns, nutrition, exercise habits, chronic illnesses) Perceived Stress Scale (PSS). Measures subjective stress perception. Cohen-Hoberman Inventory of Physical Symptoms (CHIPS) . Assesses somatic complaints. Data were analyzed using SPSS, employing descriptive statistics.

Results

Findings revealed a strong association between higher PSS scores and increased CHIPS symptom severity ($r = 0.528$, $p < 0.01$). Students with greater stress levels reported fatigue, muscle tension, gastrointestinal discomfort, and sleep disturbances.Gender Differences: Female students exhibited significantly higher stress levels and more frequent symptoms compared to males ($p < 0.05$).Physical Activity and Stress: Those exercising five or more days per week had the lowest CHIPS scores, indicating physical activity as a protective factor against stress-related symptoms. Conversely, students who did not exercise had substantially higher symptom prevalence ($p < 0.05$). Faculty-Based Differences: Medicine students recorded the lowest stress levels (Mean PSS = 22.45, SD = 5.87) and moderate CHIPS scores, possibly due to structured academic environments.

Conclusion

This study highlights a clear association between perceived stress and physical symptoms, emphasizing the necessity of targeted student support mechanisms that:

- Encourage physical activity as a means of reducing stress-related symptoms- Promote sleep hygiene through awareness and lifestyle modifications

- Strengthen nutritional education to improve dietary habits and mitigate stress effects

Keywords: Perceived stress, somatic symptoms, university students

STUDY CODE: PP13

THE MEASUREMENT OF EMPATHY LEVELS IN EMU MEDICAL STUDENTS

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Introduction

Empathy is a vital component in clinical communication and effective healthcare delivery. It strengthens physician-patient relationships, promotes accurate diagnosis, and enhances treatment adherence. However, studies have shown that empathy may decline during the course of medical education. This study aims to assess and compare the empathy levels among first-, second-, and third-year medical students at “Eastern Mediterranean University (EMU)”, using the Toronto Empathy Questionnaire (TEQ).

Methods

A cross-sectional study was conducted during the 2024–2025 academic year at EMU among Phase 1 medical students. A total of 107 students were randomly selected from the population of 175 students, ensuring proportional representation of each academic year. Data was collected through a questionnaire comprising demographic information and the 16-item TEQ, rated on a 5-point Likert scale. Higher TEQ scores indicate higher emotional empathy. 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 analysis showed the first year students having the lowest mean for the empathy levels, peaking at second years and a decline in third years staying above the first years. The mean TEQ score of the students was 42.4/65. Additionally, female students consistently scored higher than male students.

Conclusion

Although the empathy levels increased after the first year, the total mean score for each year was significantly lower than other similar studies had been done on medical students. Introducing more reflective practices and rearranging the empathy-focused training may help sustain this essential trait in future physicians.

Keywords: Empathy, Medical Education, Toronto Empathy Questionnaire

STUDY CODE: PP14

THE RELATIONSHIP BETWEEN SLEEP DEPRIVATION AND COGNITIVE PERFORMANCE IN MEDICAL STUDENTS

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Introduction

Sleep deprivation is a growing concern among university students, significantly affecting their academic performance and emotional well-being. This study investigates the cognitive and psychological consequences of insufficient sleep and explores lifestyle factors contributing to poor sleep quality in young adults.

Methods

A structured survey was conducted among 107 university students. Participants provided information on their sleep duration, academic workload, screen time, and emotional experiences. The collected data were analyzed to evaluate the relationship between sleep patterns and cognitive-emotional responses such as concentration, stress, and mood.

Results

The analysis revealed that a majority of participants (approximately 76%) sleep less than six hours per night. These students commonly reported experiencing daytime fatigue, attention deficits, and increased irritability. A statistically significant correlation was found between shorter sleep durations and elevated stress levels, along with reduced academic satisfaction.

Conclusion

The findings indicate that sleep deprivation is significantly associated with diminished cognitive performance and negative emotional outcomes in university students. Promoting healthy sleep habits and awareness programs may benefit students' academic and psychological health.

Keywords: sleep deprivation, cognitive performance, emotional health, university students, sleep habits

STUDY CODE: PP15

CLINICAL AND BIOCHEMICAL RISK FACTORS FOR HIP FRACTURES: A RETROSPECTIVE CASE-CONTROL STUDY AT BURHAN NALBANTOĞLU STATE HOSPITAL

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Introduction

Hip fractures are among the most serious orthopedic injuries, contributing significantly to morbidity, mortality, and healthcare burden. Identifying clinical and biochemical predictors of hip fractures may enable early risk stratification and more personalized treatment approaches in orthopedic practice.

Methods

This retrospective case-control study analyzed data from 176 patients admitted to the Orthopedics Department of Burhan Nalbantoğlu State Hospital between January and December 2024. The fracture group included 88 patients who underwent surgery for hip fractures, while the control group comprised 88 patients admitted for other types of fractures. Variables included demographics, comorbidities, type of surgery, laboratory parameters (hemoglobin, glucose, creatinine, albumin, calcium, sodium), length of hospital stay, and discharge status. Statistical tests used were Mann–Whitney U for continuous variables and Chi-square or Fisher's exact tests for categorical variables. Multivariate logistic regression was conducted to identify independent predictors of poor outcomes.

Results

Hip fracture patients were significantly older and exhibited a higher prevalence of comorbidities such as hypertension, diabetes, and osteoporosis ($p < 0.05$). They had lower hemoglobin, calcium, and sodium levels, and elevated glucose, urea, and ALT levels compared to controls ($p < 0.05$). These patients also experienced longer hospital stays and higher in-hospital mortality ($p < 0.01$). Logistic regression identified anemia (Hb <12 g/dL), hypoalbuminemia, and multiple comorbidities as independent predictors of adverse outcomes.

Conclusion

Patients with hip fractures display distinct clinical and biochemical profiles associated with worse prognoses. These findings highlight the value of early laboratory screening and comorbidity evaluation to improve clinical decision-making and resource allocation in orthopedic care.

Keywords: Hip fracture, comorbidity, risk factors

STUDY CODE: PP16

ATTITUDES OF MEDICAL STUDENTS TOWARDS ORGAN DONATION

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Introduction

This study aims to explore medical students' attitudes toward organ donation, emphasizing their crucial role in education, advocacy, and clinical practice. It highlights findings from various international studies, which reveal generally positive attitudes but also significant gaps in knowledge and influence from religious and ethical factors. The study seeks to assess awareness, identify information sources, examine ethical and religious views, evaluate educational impacts, and support policy and awareness efforts.

Methods

This study used a cross-sectional survey to assess EMU medical students' attitudes toward organ donation, targeting 1st to 3rd grade students with a sample size of 120. A 23question questionnaire covering demographics, organ donation, and awareness was distributed both online and in paper form. Ethical approval was obtained, and participation was voluntary, anonymous, and conducted with informed consent.

Results

Most of the students who participated in the survey were aware of organ donation, with social media and educational settings such as school or seminars being the most common sources of information. Senior students showed more positive attitudes, while religious and ethical concerns were noted as barriers by some participants. The most frequently cited motivation for donation was “saving lives.” Statistical analysis showed that academic level and prior training had a significant impact on students' attitudes.

Conclusion

This study shows that medical students at EMU generally have a positive attitude toward organ donation. These attitudes are influenced by factors such as academic year, religious beliefs, and educational exposure. Integrating organ donation education into the curriculum and increasing awareness efforts can help strengthen these positive perspectives.

Keywords: Organ donation, Awareness, Ethical perspectives

STUDY CODE: PP17

PRELIMINARY ASSESSMENT OF KNOWLEDGE, ATTITUDES, AND PRACTICES TOWARD COLORECTAL CANCER SCREENING AMONG INDIVIDUALS AGED 35 AND ABOVE IN NORTH CYPRUS

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Introduction

Colorectal cancer (CRC) is the third most prevalent malignancy in North Cyprus (19.2 per 100,000). Early detection through screening significantly reduces mortality, yet participation remains low. This preliminary study aims to assess knowledge, attitudes, and practices (KAP) toward CRC screening among adults aged 35 and above in Famagusta, in order to identify key barriers and inform future awareness strategies.

Methods

A cross-sectional study was conducted in Famagusta, Nicosia, Kyrenia as part of a broader, multi-region research project. Using random sampling, eligible participants (aged ≥35) completed a 37-item validated questionnaire adapted from Wong (2021), covering knowledge (24 items), attitudes (7 items), and practices (6 items) regarding CRC and its screening. Additionally, some demographic questions were also provided to the participants to better understand the relationship between demography with KAP. Informational leaflets and brief awareness sessions were provided. Data were analyzed using SPSS, employing descriptive statistics, Mann–Whitney U test, and Kruskal–Wallis test, Spearman's correlation and Chi-square to explore demographic influences. Ethical approval was obtained from the Eastern Mediterranean University Ethics Board.

Results

Non-parametric analyses revealed that knowledge scores were significantly higher among participants with health insurance ($p = 0.018$). Education level was associated with attitude scores ($p = 0.007$), and gender significantly influenced attitudes toward screening ($p < 0.001$), with females reporting more positive attitudes.Previous participation in any cancer screening program, personal or familial cancer history, and awareness of general and colorectal cancer-specific screening programs were significantly related to higher knowledge and attitude scores (all $p < 0.05$).Among all demographic and background variables, only type of financial support showed a significant relationship with practice scores ($p = 0.023$), with government-supported individuals reporting more frequent participation in screening.

Conclusion

Findings from Famagusta underscore the need for targeted public health strategies to improve CRC screening rates. Interventions addressing stigma, affordability, and accessibility, combined with education and physician engagement, may enhance screening uptake. Full regional data will further guide efforts to reduce CRC-related morbidity and mortality in North Cyprus.

Keywords

Colorectal Cancer; Screening; KAP

STUDY CODE: PP18

ANALGESIC USAGE AMONG EMU STUDENTS IN HEALTH-RELATED FACULTIES: FREQUENCY AND CONTRIBUTING FACTORS

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Introduction

Over-the-counter (OTC) analgesics are frequently used by university students to self- manage discomforts such as headaches, menstrual pain, or flu symptoms. However, unsupervised use may pose risks, especially under academic stress. Understanding how and why students, particularly in health faculties, use painkillers is crucial to promoting safe self-medication habits.This study aimed to determine the frequency of analgesic use among students in health-related faculties (Medicine, Dentistry, Pharmacy, and Health Sciences) at Eastern Mediterranean University and explore factors influencing their usage, such as perceived stress, general health, academic year, gender, and symptom type.

Methods

A cross-sectional survey was conducted using a structured, self-administered questionnaire incorporating the SF-36 and Perceived Stress Scale (PSS). The questionnaire included demographic information, analgesic usage patterns, illness history, and stress-related behaviors. Descriptive statistics and inferential analyses (Chi- square tests, t-tests, and correlation analysis) are planned using SPSS software. As of this preliminary analysis, data from health faculties ($n \approx$ preliminary sample) were analyzed.

Prelimimary Results

Initial observations are expected to suggest a high prevalence of analgesic use among female students, particularly for menstrual pain and headaches. Paracetamol and NSAIDs are anticipated to be the most frequently reported medications. Higher perceived stress scores, especially during exam periods, are expected to correlate with increased painkiller use. Students in earlier academic years are expected to report more stress-related analgesic use compared to seniors. Also, students with poor self-reported health (SF-36) may show more frequent use across multiple symptoms. Chi-square analysis is expected to show significant associations between gender and painkiller purpose, while correlation analysis may reveal moderate relationships between PSS scores and usage frequency. So far, a total of 128 responses have been collected, including 41 from the Faculty of Health Sciences, 22 from Dentistry, 28 from Pharmacy, and 37 from Medicine. Questionnaire distribution is still in progress, and further responses are expected to enhance the strength and representativeness of these preliminary findings.

Conclusion

Preliminary findings suggest that analgesic use is prevalent among health faculty students, influenced by stress levels and gender-specific conditions. These trends highlight the need for education on safe analgesic use and stress management. Final results will offer a broader perspective to inform future interventions.

Keywords

OTC analgesics, painkiller use, EMU students

STUDY CODE: PP19

EXAM ANXIETY AND PERCEIVED STRESS AMONG EMU MEDICAL STUDENTS: A CROSS-SECTIONAL STUDY OF THEIR CONNECTION

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Introduction

Medical students are known to suffer from increased anxiety and stress, especially before exams, which can negatively impact their academic performance and mental health. The aim of this study is to measure stress and test anxiety among medical students at Eastern Mediterranean University (EMU).

Material and Method

This study is a cross-sectional observational study conducted during the 2024–2025 academic year. Validated self-administered instruments, including the Perceived Stress Questionnaire (PSQ) and the Westside Test Anxiety Scale, were used to assess participants' levels of stress and test anxiety. Data analysis was performed using SPSS 22 and P-values below 0.05 were considered statistically significant.

Results

A total of 120 medical students participated in the study. The mean age of the participants was 20.05 ± 1.28 years. The average scores were 32.32 ± 4.46 on the Westside Test Anxiety Scale and 75.28 ± 6.14 on the Perceived Stress Questionnaire (PSQ). The year of study (first, second, or third year) nor their financial status had a significant effect on their test anxiety for perceived stress levels ($p > 0.05$).

Conclusion

The results indicate that moderate levels of stress and test anxiety are prevalent among medical students, independent of academic year or financial status. This suggests that the factors contributing to psychological distress in medical education may be more universally experienced across different student groups. These findings emphasize the need for targeted interventions to address stress and anxiety throughout the medical curriculum, irrespective of students' academic progression or socioeconomic background.

Keywords: Test Anxiety, Stress, Medical Students, Academic Performance, Mental Health

STUDY CODE: PP20

NEEDS OF SOCIAL SUPPORT ON MEDICAL STUDENTS' MENTAL HEALTH

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Introduction

Medical students often experience high levels of stress due to the intense nature of their education. This can lead to mental health problems such as anxiety, depression, and burnout. Social support -emotional, informational, and practical help from others- can reduce these negative effects. However, there is limited research on how well support systems meet
students' needs in medical school.

Materials & Methods

A cross-sectional survey was carried out with 120 medical students from the Dr. Fazıl Küçük Faculty of Medicine during the 2024–2025 academic year. Participants included students in their first, second, and third years. The study used two standard mental health tools (PHQ-9 and GAD-7) and a questionnaire that measured how much support students felt they received from family, friends, faculty, and peers. The data were analyzed to find links between social support and mental health outcomes.

Results

It has seen that students who feel more supported will show lower levels of stress, anxiety, and depression. Family and peer support are likely to be the most helpful. Common challenges to receiving support may include stigma, lack of time, or limited access to professional help. Furthermore, it has seen that most of them are not aware of the mental health support services.

Conclusion

This study will highlight how important social support is for maintaining good mental health among medical students. It aims to provide useful suggestions for improving support services in medical schools, such as better counseling options, stronger faculty support, and a more caring learning environment.

Keywords: Social support, mental health, well being

STUDY CODE: PP21

ATTITUDES OF MEDICAL STUDENTS TOWARDS ABORTION

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Introduction
Abortion remains a controversial issue involving medical practice, ethics, legislation, and personal beliefs. As future healthcare providers, medical students play a crucial role in providing reproductive health services, such as abortion. Evaluating students' knowledge and attitudes toward abortion is essential for integrating reproductive rights into medical education and promoting patient-centered care. The purpose of this study was to investigate the attitudes, knowledge, and ethical perspectives of medical students at Eastern Mediterranean University (EMU) regarding abortion. The study examined how cultural, religious, and educational factors influenced their views.

Methods
A cross-sectional survey was conducted at EMU using a structured questionnaire covering six domains: demographics, general knowledge, ethical and legal perspectives, medical and situational considerations, opinions and attitudes and finally, beliefs. Data were collected from 97 students, primarily through face-to-face interactions, with confidentiality strictly maintained. The quantitative data were analyzed in SPSS and the responses from the open-ended questions were analyzed thematically.

Results
The majority of students supported access to abortion under conditions of medical necessity or sexual assault. There was a general consensus among medical students that abortion training should be included in the medical curriculum and considered essential to health care. However, responses varied based on factors such as year of study, gender, and religious beliefs. While students demonstrated moderate knowledge of abortion laws and clinical procedures, many indicated a need for further education on the topic

Conclusion
The findings highlight diverse and evolving attitudes among future physicians and underscore the need for a comprehensive medical curriculum that integrates reproductive rights. Personal beliefs continue to influence how future physicians approach their professional responsibilities. Preparing students for ethical dilemmas is essential for delivering compassionate and patient-centered care.

Keywords: Abortion, Medical students, Attitudes.

STUDY CODE: PP22

ATTITUDES AND EXPERIENCES OF AUTISM AMONG EMU MEDICAL STUDENTS

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Introduction: Autism spectrum disorder (ASD) is a life-long neurological condition, which impacts people's communication, behavior and social interaction. For medical students that are about to begin working in healthcare it is very important to have good knowledge on how to support autistic people properly and to treat them respectfully and inclusively. This study aims to describe the way medical students at Eastern Mediterranean University (EMU) perceive autism, the degree to which they feel confident in dealing with autistic people and the role which the academic training has played in their experiences and attitudes towards this condition.

Methods: A cross-sectional survey was administered to 105 EMU medical students from years 1 to 3. For this survey, a structured survey questionnaire was used to collect demographic data, previous experiences with autism education, self-perceived understanding and attitudes towards autistic patients. The data was collected in a Likert scale and analyzed using SPSS.

Results: Only 22.9% of the EMU medical students reported that they had received formal training on autism. Surprisingly, 63.8% did not agree that their medical curriculum had sufficient information about ASD. Despite the interest of 70.5% in the additional workshops, 34.3% were neutral or uncertain as to whether they could recognize autistic traits in the clinical setting. Nevertheless, 76.2% felt that early diagnosis promotes better outcomes and 68.6% believed that additional training is required to facilitate care for autistic patients.

Conclusion: The students demonstrated high motivation to learn and assist people with ASD, although conditioned with limited formal instructions. The results suggest a major gap in preclinical education, but this also represents an opportunity: implementation of a structured, evidence-based training of autistic population into medical curricula may have a major positive impact on the prospects of the future healthcare.

Keywords: Autism Spectrum Disorder, Medical Education, Student Attitudes

STUDY CODE: PP23

PREVALENCE AND IMPACT OF INTERNET ADDICTION, SLEEP DISORDERS, AND MENTAL HEALTH CHALLENGES AMONG MEDICAL STUDENTS: A CROSS-SECTIONAL STUDY

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Introduction

Internet addiction (IA) is a behavioral condition characterized by excessive and uncontrolled internet use that interferes with daily life and well-being. This phenomenon is particularly concerning among university students, who experience high stress due to academic and social pressures. IA has been associated with psychological distress, poor academic performance, and sleep disturbances.

Aim: This study aims to examine the relationship between IA and mental health challenges, focusing on the impact of sleep disturbances among medical students.

Hypothesis: Higher levels of internet addiction are significantly associated with poor sleep quality and increased psychological distress in medical students.

Methods

A cross-sectional study was conducted at the Eastern Mediterranean University, Faculty of Medicine, during the 2024–2025 academic year. Data were collected in January 2025 using a structured questionnaire. The sample consisted of 123 randomly selected medical students. The survey included demographic variables, internet usage habits, sleep patterns, and mental health indicators.

Key variables: Independent variable: Internet addiction level. Dependent variables: Sleep quality, stress, and anxiety symptoms. Descriptive and inferential statistical analyses were applied.

Results

Out of 123 students, 95 responded (response rate: 77.2%).

Internet Usage: 50.5% reported using the internet for 5–7 hours daily; 63.2% said it significantly helped them escape negative emotions. Sleep: 54.7% slept 6–8 hours on weekdays, yet 42 students had difficulty falling asleep. 61.1% believed their sleep was negatively affected by internet use. Mental Health: 45.3% reported that internet usage negatively impacted their mental health; 27.4% experienced daily stress.

Conclusion

The findings indicate a strong association between excessive internet use and sleep disruption among medical students. While mental health effects were moderate, disrupted sleep emerged as the most prominent consequence of IA. This suggests that sleep disturbance may be a mediating factor between IA and psychological well-being. Interventions promoting healthier internet habits and sleep hygiene are recommended to safeguard student health and academic success.

Keywords

Internet addiction, sleep quality, medical students

STUDY CODE: PP24

COPING MECHANISMS FOR STRESS AMONG MEDICAL STUDENTS

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Introduction

Medical education is one of the most demanding academic pathways. It involves the development of practical skills, critical thinking, and emotional resilience. Stress, in this context, is defined as a psychological response to academic and clinical pressures that challenge an individual's ability to cope. This cross-sectional study was primarily conducted by first-year medical students at the Dr. Fazıl Küçük Faculty of Medicine, Eastern Mediterranean University, during the 2024–2025 academic year with the aim of to exploring the different coping strategies medical students use deal with their stress.

Material and Methods

Total of 121 medical students chosen from 176 at Eastern Mediterranean University participated by completing an anonymous questionnaire involving 30 questions. Data were collected using a self-administered questionnaire consisting of likert-scale items designed to evaluate how students manage stress. Data is analyzed using descriptive and comparative statistics with the software “SPSS” to assess coping strategies.

Results

The study conducted shows that the variety of coping mechanisms used among medical students at EMU. As positive mechanisms there are are problem-focused strategies also known as adaptive mechanisms (e.g., planning, time management) and emotion-focused strategies (e.g., seeking social support). As the opposite, the negative strategies are maladaptive coping strategies (e.g., avoidance or supression) and acceptance based strategies (eg., accepting, learning to live with stress). No significant relationship with coping mechanisms and gender or year of study is found. These findings suggest that adaptive coping is the most widely used mechanism among the participants. However there are still significant number of medical students using maladaptive coping mechanisms

Conclusion

These findings highlight the need for peer support programs and stress management workshops to help medical students deal with their stress in a more efficient way possible.

Keywords

Academic stress, Coping Behaviors, Medical Students