



# 17TH

## UNDERGRADUATE MEDICAL RESEARCH CONFERENCE

# ABSTRACT BOOK

6TH & 7TH MARCH, 2024



**BRIDGING MINDS,  
ADVANCING RESEARCH**



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## MESSAGE FROM DEAN

It is indeed a source of immense honor and satisfaction to acknowledge the 17<sup>th</sup> Undergraduate Medical Research Conference, organized by our esteemed college's Undergraduate Medical Research department. This event stands as a testament to our unwavering commitment to creating an environment conducive to the exchange of ideas, aimed at addressing pressing health challenges through research.

The conference aims to delve into current national and international issues, particularly in the dynamic fields of medical and biological sciences. After receiving a total of 137 high-quality research abstracts, I am confident that this gathering will foster an amiable environment for our students and teachers alike to freely exchange views and ideas, contributing to the advancement of knowledge in our field.

As a medical college, our primary challenge is to remain competitive and relevant. This involves offering top-notch technical academic training and prioritizing research activities, especially in our niche areas. The generation of new knowledge and findings is inherently linked to our commitment to research and development activities.

I extend my heartfelt appreciation to the UMR Society 2024 committee members, faculty, and students for their tireless efforts and unwavering dedication. Without their commitment, this event would not be possible. My warm greetings go to the guests and participants hailing from every corner of the country, along with my best wishes for the resounding success of the conference.

May this endeavor be blessed! Ameen.

Prof. Dr. Hafeez Ur Rahman  
Dean Health Sciences

## MESSAGE FROM DIRECTOR

As the Director of the Research Department, it brings me immense joy and pride to present this compiled abstract book, showcasing the knowledge, innovation, and passion within our student community. This book stands as a testament to the dedication and hard work of numerous individuals who have tirelessly contributed to its creation.

At the heart of this endeavor lies the UMR Student Society for Research Advancement, a vibrant and dynamic group of students who have demonstrated exceptional commitment to promoting research culture within our institution. Their unwavering enthusiasm and tireless efforts have been instrumental in organizing the large-scale event where students from diverse disciplines converge to share their research findings, exchange ideas, and inspire one another.

I extend my deepest gratitude to the organizers of this event, whose meticulous planning and attention to detail have ensured its success. Their creativity and leadership have made these abstract submissions into a comprehensive volume that encapsulates the breadth and depth of research conducted by our students throughout the country.

To the contributors of this abstract book, your dedication to compile and review the abstracts through rigorous work. To the researchers, your research endeavors represent the culmination of countless hours of hard work and critical thinking. By sharing your findings and insights, you contribute not only to the academic community but also to the broader community. I hope that this compilation will inspire future generations of students to pursue their intellectual passions and embark on their journeys of exploration.

Finally, I would like to express my profound appreciation to everyone who has contributed to the organization of the 17<sup>th</sup> UMR Conference 2024. I extend my heartfelt gratitude to the dedicated members of the UMR Society and the administration for their tireless efforts in coordinating a truly remarkable research conference. Their untiring commitment and meticulous planning played a key role in ensuring the event's success. From coordinating logistics to fostering an engaging atmosphere, their contributions have been invaluable. It is through their collective passion and dedication that this conference has flourished into a platform for meaningful exchange and scholarly discourse. I am immensely grateful for their hard work and dedication, without which this event would not have been possible.

Allah bless you all,

Dr. Hala Rajab  
Director  
Undergraduate Medical Research Department

## MESSAGE FROM PRESIDENT

Curiosity in its essence is deeply rooted in human existence, it is only when we learn to carve it out, that we realize what a magnificent asset it is. Over the course of time, seekers among us questioned the world around them, and through that, they found answers that outlived them, contributing to human civilization in ways unparalleled ways.

As the president of the UMR Society, it has been an absolute honor to lead the organizing team of the 17<sup>th</sup> UMR full of dedicated bright young minds who have been able to deliver this conference in such a professional manner. The UMR conference aims to provide a platform where future health professionals get to engage, grow, learn, and contribute to the culture of research. The purpose of the conference is to allow students to understand the rationale behind research and the modern-day trends surrounding research.

I would like to thank all the members of our society for their enthusiasm and hard work; indeed, it was a learning experience like no other. I would also like to thank the faculty members for their guidance and mentorship. Lastly, I want to thank Allah (SWT) for giving us this opportunity to contribute to the goodness around us, Alhamdulillah.

Mr. Abdullah Khalil  
President 17<sup>th</sup> UMR Society 2024

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# **BASIC AND CLINICAL SCIENCES**



# **ANTERIOR SKULL BASE TUMORS: COMPARATIVE ANALYSIS OF ENDOSCOPIC AND OPEN APPROACHES, TUMORS CLASSIFICATION, PREVALENCE AND ASSOCIATED SURGICAL COMPLICATIONS - A SYSTEMATIC REVIEW**

**Ubaid Ullah, Sajjad Ullah, Aziz Ur Rehman, Umar Farooq, Aziza Alam, Rubeena Gul**  
Khyber Medical College

## **INTRODUCTION:**

Anterior skull base tumors present unique challenges due to their proximity to vital structures. Surgical management has evolved with the advent of endoscopic and open techniques. Endoscopic procedures, involving small incisions and specialized tools, reduce morbidity and hasten recovery. Open techniques offer direct tumor access, enabling complete removal. Meningiomas dominate anterior skull base tumors, with esthesioneuroblastoma and other rare variants also occurring. Incidence varies by histology and demographics. Surgery entails risks like carotid injury and CSF leaks, influenced by tumor characteristics and approach.

## **OBJECTIVE(S):**

1. To conduct a review on different types of anterior skull base tumors, their prevalence approaches toward them, and associated surgical complications.

## **METHODOLOGY:**

In conducting the review, we systematically searched databases (PubMed MEDLINE, JSTOR, and Science Direct) for articles related to the topic and its MeSH Terms. From 1200 initially identified articles (1981–2022), those featuring review articles, case studies, and retrospective studies were selected. Adhering to PRISMA guidelines, data from each chosen article were meticulously extracted, covering surgical approach, tumor type, prevalence rates, and complications. After eliminating duplicates, 480 potential investigations remained, and subsequent screening led to the inclusion of 58 relevant references in the study.

## **RESULTS:**

The endoscopic approach, favored for its minimally invasive nature, offers reduced morbidity and faster recovery. Conversely, the open approach suits larger or more complex cases. The review explores anterior skull base tumors (e.g., pituitary adenomas, meningiomas), detailing clinical presentations, diagnostics, and surgical challenges, and emphasizing early detection's crucial role.

## **CONCLUSION:**

Despite surgical advancements, complications persist in tumor resection as discussed in the article.

## **KEYWORDS:**

Anterior Skull Base Tumors, Surgical Complications, Endoscopy, Early Detection.

# **REVEALING DIFFERENTIALLY EXPRESSED GENES (DEGS) IN RECURRENT CLASSICAL HODGKIN LYMPHOMA (CHL) AND EXPLORING THE HORIZON OF REPURPOSED DRUGS**

**Ahad Ali Nazir**, Madina Sherdil, Faisal Khan  
Rehman Medical College, Peshawar

## **INTRODUCTION:**

Classical Hodgkin Lymphoma (cHL), a subtype of Lymphoma, has a relapse incidence of 10%–30%. This study aims to address the absence of targeted therapies and increased risk factors associated with current medications for relapsed cHL.

## **OBJECTIVE(S):**

1. To do a comparative analysis of Differentially Expressed Genes (DEGs) in relapsed cHL and cHL.
2. To repurpose drugs for their treatment.

## **METHODOLOGY:**

In a Systematic literature search on PubMed with keywords "DEGs," cHL, "Relapsed cHL," and "Drug repurposing," 16 relevant articles were identified. Datasets were sourced from TCGA, cBioPortal, and GEO, followed by stringent filtering. DEGs were identified using the limma package ( $p < 0.001$ ,  $\log FC > 2.5$ ). Gene Ontology analysis utilized DAVID, and drug repurposing was aided by DGIdb.

## **RESULTS:**

Databases (TCGA, cBioPortal, GEO) were explored, and after filtering, 3 datasets (GSE12453, GSE20011, GSE17920) with 157 samples were selected. Post-normalization, DEGs were identified by comparing "Relapsed cHL" and "cHL" in R using the limma package. Initially, 54,676 DEGs were found, filtered by p-value and log-FC (fold change), yielding 1065 DEGs. Top five DEGs emerged: SPARCL1, LUM, PRKACB, S100A4, GUCY1B1, HNMT. DGIdb identified 65 drugs for these DEGs. The top five drugs based on Query and Interaction Scores are Bosutinib, Nilotinib, Adenosine triphosphate, Ponatinib, and Flumatinib.

## **CONCLUSION:**

This study identified 1000+ significant DEGs with the potential to treat relapsed cHL. Drugs that could be specific for these DEGs, enhancing clinical relevance were enlisted. These findings offer promise for innovative therapies, emphasizing DEG modulation as a strategy in cHL. Further research is crucial for advancing treatment options.

## **KEYWORDS:**

Classical Hodgkin's lymphoma, Relapse, Differently Expressed Genes, Drug Repurposing, Gene Ontology.

# **ASSESSMENT OF RISK FACTORS FOR THE DEVELOPMENT OF CHRONIC KIDNEY DISEASES (CKD) IN TERTIARY CARE HOSPITALS OF PESHAWAR**

**Fatma Hussain**, Usama Inyata, Sara Rasul, Muhammad Ahmad, Nadia Khan, Sara Sami, Abdul Kabir, Harvend Singh Jaggi, Muhammad Bilal Rashid, Faisal Khan, Ubaidullah, Gohar Rehman, Kamran Khan  
Khyber Medical College, Peshawar

## **INTRODUCTION:**

CKD, a prolonged decline in kidney function, is a global concern, especially in regions with limited healthcare access. It's often linked to diabetes, hypertension, and lifestyle choices. In Pakistan, CKD is on the rise, associated with factors like age, hypertension, and diabetes.

## **OBJECTIVE(S):**

1. To assess the risk factors for the development of chronic kidney disease in tertiary care hospitals of Peshawar.
2. To guide targeted risk factor management.

## **METHODOLOGY:**

A descriptive cross-sectional study was conducted from February 2022 to September 2023 in tertiary care hospitals of Peshawar. 168 CKD patients of all ages were selected through non-probability sampling. Written consent was obtained from the patients. Data was collected through a structural questionnaire and was analyzed using SPSS version 25.

## **RESULTS:**

This study examined CKD risk factors in participants with a mean age of 44.82 years. Gender distribution was 56% male and 44% female. BMI correlated positively with CKD incidence. DM prevalence (39.3%) showed a strong link. Hypertension was reported by 4/5<sup>th</sup> of patients. Various factors like smoking, CVD history, kidney disease history, herbal medication, analgesic use, and hepatitis B and C infection were observed, highlighting diverse CKD risk factors in the study population.

## **CONCLUSION:**

This study revealed a lack of gender-specific risk for CKD. BMI showed a strong correlation, emphasizing obesity prevention. Early CKD awareness within 1-3 years underscores the need for education. Family history (14.3%), diabetes (39.3%), and hypertension (79.8%) suggest crucial intervention points.

## **KEYWORDS:**

Hypertension, Diabetes Mellitus, Obesity.

# FUNCTIONALIZED PH-SENSITIVE LIPOSOMES FOR ESTROGEN RECEPTOR-POSITIVE BREAST CANCER THERAPY

Hafsa Zahid, Ayesha Zaib Awan, Fazal Subhan  
CECOS University of IT and Emerging Sciences, Peshawar

## INTRODUCTION:

Breast Cancer (BC) remains a global health challenge that demands innovative therapeutic approaches. This study focuses on addressing the complexities of ER-positive BC, characterized by overexpressed estrogen receptors (ER). Conventional therapies, such as surgery, chemotherapy, and radiotherapy, face challenges in efficacy and adverse effects. Multidrug resistance further hampers treatment success.

## OBJECTIVE(S):

1. To explore the potential of functionalized pH-sensitive liposomes as nanocarriers for targeted drug delivery in ER-positive BC.
2. To investigate various types of functionalized liposomes, highlighting their efficacy in controlled drug release within the tumor microenvironment.

## METHODOLOGY:

This retrospective survey-based study investigates different types of functionalized liposomes, including PEGylated liposomes, immunoliposomes, aptamer-modified liposomes, peptides-functionalized liposomes, and ligand-modified liposomes. The study was conducted at CECOS University, Peshawar from sept 2023 to Dec 2023, to evaluate the enhanced efficacy of these liposomes in ER-positive BC models, combining surface functionalization with stimuli-mediated release for improved therapeutic outcomes. The python 3.12.1 was used to analyze the data.

## RESULTS:

The experimental findings demonstrate the enhanced efficacy of pH-sensitive liposomes in ER-positive BC models. The functionalized liposomes exhibit improved cellular uptake, enhanced cytotoxicity, and reduced side effects compared to conventional therapies. The results underscore the potential of functionalized pH-sensitive liposomes as a promising strategy in BC therapy.

## CONCLUSION:

This study emphasizes the significance of advanced drug delivery strategies, specifically functionalized pH-sensitive liposomes, in addressing challenges associated with ER-positive BC treatment. The enhanced efficacy, reduced side effects, and precise targeting observed in experimental studies suggest the potential of these liposomes as a valuable addition to breast cancer therapeutic approaches.

## KEYWORDS:

Breast Neoplasms, Estrogen Receptor-Positive Breast Cancer, Liposomes, Drug Delivery Systems, pH-Sensitive Liposomes.

# KNOWLEDGE OF NURSES REGARDING PALLIATIVE CARE IN TERTIARY CARE HOSPITALS OF PESHAWAR

Syed Majid Hussain, Kashif Iqbal, Tariq Jamil, Syed Hanif Ullah, Sidra Rahim, Zeshana Iman, Kausar Amin  
Rufaidah Nursing College, Peshawar

## INTRODUCTION:

Palliative care refers to a set of practices that improve the quality of life of patients facing the problems associated with terminal illnesses through specific techniques that relieve the suffering using early identification, spotless assessment and treatment of pain along with other physical, psychosocial, and spiritual endures.

## OBJECTIVE(S):

1. To measure the knowledge of nurses regarding palliative care in tertiary care hospitals of District Peshawar.

## METHODOLOGY:

A descriptive cross-sectional study was conducted in tertiary care hospitals of Peshawar over nurses from August 2023 to November 2023. 377 participants were enrolled using a convenient sampling method. The data was collected through 'Palliative Care Quiz for Nurses' (PCQN) and analyzed through SPSS 26. The correlation between PCQN scores and some demographic factors; age, years of nursing experience, and duration of experience of caring for a dying member of the family was examined by Pearson co-relation coefficient. Chi-square test was used to examine the correlation between PCQN scores and some other demographic factors; ward, gender, palliative care education, and previous personal studies about palliative care.

## RESULTS:

This study involved 377 participants, comprising 38.7% male and 31.3% female nurses aged 18 to 53. Utilizing a palliative care quiz, findings revealed that 37.7% exhibited a lack of knowledge, 30.5% showed poor knowledge, and 31.8% demonstrated good knowledge. These results highlight diverse levels of palliative care awareness among nurses, emphasizing potential areas for targeted education and improvement.

## CONCLUSION:

This study highlights the need for tailored training programs, targeted educational initiatives, and continuous education to empower nurses globally and enhance comprehensive palliative care delivery.

## KEYWORDS:

Palliative Care, Knowledge, Nurses.

# **EFFECT OF EDUCATIONAL INTERVENTION ON KNOWLEDGE REGARDING PCOS AMONG MEDICAL STUDENTS**

**Laiba Noor**, M Hassan, Kinza Asif, Rafia Anser, Muniba Nadeem, Fateha Khan, Maryam Awais, Noreen Fatima, Hafiz M. Abdullah, Ali Nawaz, Sameer Nadeem Khan, Shahaan Zafar, Muneeb Khan  
Wah Medical College, Wah Cantt

## **INTRODUCTION:**

Polycystic Ovarian Syndrome (PCOS) is a prevalent endocrine disorder in women aged 18-44, characterized by irregular menstrual periods, hirsutism, and obesity associated with type 2 diabetes and pregnancy difficulties.

## **OBJECTIVE(S):**

1. To assess the knowledge regarding (PCOS) among medical students.
2. To measure the effect of instructive programs on the level of knowledge about PCOS.

## **METHODOLOGY:**

Quasi-experimental was used to conduct this study at Wah Medical College for a duration of six months from December (2022) to May (2023). 199 students were selected by stratified random sampling technique. An MCQ-based questionnaire (Cronbach's Alpha value=0.68) was used to collect data. The level of knowledge of students was assessed before and after the knowledge intervention program (series of informative videos). SPSS v-23 was used to analyze the data. Qualitative variables were compared using the chi-square test, while for quantitative variables T-test was used. A p-value less than 0.05 demonstrated statistical significance.

## **RESULTS:**

Initially, 30 % of students had good, 50 % had moderate and 20 % had poor knowledge regarding PCOS. After an educational intervention, the level of knowledge became 82 % good, 12.5 % moderate, and 5.5 % poor. There was a significant increase in the knowledge of students after the educational session (p-value 0.00).

## **CONCLUSION:**

There was a significant increase in post-test knowledge. The findings emphasize the significance of incorporating targeted educational interventions in medical curricula to enhance understanding and management of PCOS among future healthcare professionals.

## **KEYWORDS:**

Polycystic Ovarian Syndrome, Medical Students, Educational Interventions.



# **ASSESSMENT OF KNOWLEDGE REGARDING NOSOCOMIAL INFECTIONS, STANDARD PRECAUTIONS, AND HAND HYGIENE AMONG MEDICAL STUDENTS AND HEALTHCARE PROFESSIONALS**

**Muhammad Husnain**, Hira Shabbir, Mariam Shaukat, Asher Iqbal, Muhammad Afaq, Muhammad Yousaf Abbas, Museera Saher, Noor ul Ain, Samra Naheed, Talha Anees, Zahran Laeeq, Zainab Shafqat, Afifa S. Farooqui  
Wah Medical College, Wah Cantt

## **INTRODUCTION:**

Nosocomial infections are a subset of infectious diseases acquired in a health-care facility, caused by a wide range of pathogens. Transmission of nosocomial infections can be reduced by improved compliance with standard precautions.

## **OBJECTIVE(S):**

1. To assess the different levels of knowledge regarding nosocomial infections, standard precautions, and hand hygiene among medical students and healthcare professionals

## **METHODOLOGY:**

A cross-sectional study was conducted in Wah Medical College and its teaching hospital from January 2023 to July 2023. 368 participants were selected through convenience sampling. Knowledge of the participants was assessed using the Infection Control Standardized Questionnaire (ICSQ). SPSS version 23 was used to analyze this data. Knowledge was assessed after the stratification of the sample into medical students and healthcare professionals. Knowledge was categorized as good, moderate, and poor. The chi-square test was applied to establish an association. A p-value less than 0.05 was considered significant.

## **RESULTS:**

The participants had a mean age of 24.23 ( $\pm 4.48$ ) years (50.8% males). The means of knowledge scores among medical students related to nosocomial infections, hand hygiene, and standard precautions were 6.25 ( $\pm 1.51$ ), 9.58 ( $\pm 2.54$ ), and 16.38 ( $\pm 4.18$ ) whereas for medical professionals the mean scores were 6.17 ( $\pm 1.62$ ), 9.18 ( $\pm 2.82$ ) and 15.44 ( $\pm 4.65$ ). The difference between the knowledge levels of medical students and healthcare professionals was significant ( $p=0.01$ ).

## **CONCLUSION:**

The majority of the medical students and professionals had moderate knowledge in all three domains. Overall difference of knowledge between medical students and health care professionals was observed.

## **KEYWORDS:**

Nosocomial Infections, Hand Hygiene, Standard Precautions.

# **A CASE STUDY: ROUND BLUE CELL SARCOMA OF CHEST WALL**

**Muhammad Hasnain, Maria Ashfaq, Mohsin Raziq, Safa Bakhtawar**  
Department of Pharmacy, University of Peshawar

## **INTRODUCTION:**

Blue cell sarcomas represent a group of aggressive malignancies characterized by undifferentiated, small, round, or spindle-shaped cells. Among these, cases involving the chest are relatively rare and pose unique challenges in terms of diagnosis and management.

## **OBJECTIVE(S):**

1. To present a comprehensive analysis of a patient diagnosed with blue cell sarcoma originating in the chest, focusing on the clinical presentation, diagnostic dilemmas, and therapeutic interventions.

## **METHODOLOGY:**

A single case study was done at IRNUM Hospital Peshawar, of a 16-year-old adolescent experiencing round blue cell sarcoma of the chest wall. We analyzed a semi-structured interview, based on resection and reconstruction. A 16-cycle chemotherapy was recommended after a series of diagnostic reports and surgeries.

## **RESULTS:**

A regrowth of Blue cell chest tumor was observed 10 days after the first surgery of resection while tumor size regression occurred after the second surgery subsequently followed by alternate chemotherapy cycles of vincristine, actinomycin, cyclophosphamide, and ifosfamide, etoposide regimen. The individuals were presented with hair fall, myelosuppression, nausea, and overall body weakness.

## **CONCLUSION:**

The study sheds light on the complexities associated with blue cell sarcoma originating in the chest, providing valuable insights into diagnostic challenges and treatment considerations. By documenting this unique case, we contribute valuable insights into the clinical aspects and treatment considerations for blue cell sarcoma of the chest.

## **KEYWORDS:**

Case Study, Blue Cell Sarcoma, Chest Wall.

# FUNCTIONALIZED PEGYLATED NIOSOMES FOR GLIOBLASTOMA MULTIFORME (GBM) THROUGH TRANSFERRIN RECEPTORS

**Ayesha Zaib Awan**, Hafsa Zahid, Fazal Subhan  
CECOS University of IT and Emerging Sciences, Peshawar

## INTRODUCTION:

Glioblastoma Multiforme (GBM) poses a significant clinical challenge due to its aggressive nature and limited treatment options, primarily stemming from obstacles in effective drug delivery through the blood-brain barrier (BBB).

## OBJECTIVE(S):

1. To address the challenges in treating Glioblastoma Multiforme (GBM). The study aims to explore
2. To evaluate innovative strategies to overcome these challenges and improve the therapeutic outcomes for GBM patients.

## METHODOLOGY:

This is a systematic review of targeted nano-delivery systems (TNDS), specifically niosomes, assessing the feasibility and effectiveness of TNDS by considering factors such as stability, controlled release, toxicity, and targeting efficiency of drug carriers. This study utilized the data from 2018 to 2023 by using SPSS 20.0 and GraphPad Prism 6.

## RESULTS:

It showed that the niosomes transiently cross the BBB, allowing for improved drug penetration into the brain. Niosomes, lipid-based nano-carriers, offer stability, controlled release, and decreased toxicity. The research investigates the potential of PEGylated niosomes, which prolong circulation and enhance drug targeting.

## CONCLUSION:

The study concludes by summarizing the challenges associated with treating GBM and emphasizing the importance of addressing BBB complexities. Various strategies, including nanodelivery systems, active targeting through specific receptors, and TfL-mediated DDS, are discussed as potential solutions to improve the efficacy of therapies for brain tumors; and GBM.

## KEYWORDS:

Pegylated Niosomes, Glioblastoma Multiforme, Transferrin Receptors, Blood-Brain Barriers, Nanocarriers.

# **ASSOCIATION OF BIOCHEMICAL PARAMETERS & DISEASE SEVERITY IN DENGUE INFECTED PATIENTS THROUGH MACHINE LEARNING AND EXPERIMENTAL ANALYSIS**

**Abdul Ahad**

CECOS University of IT and Emerging Sciences, Peshawar

## **INTRODUCTION:**

Dengue poses a significant health challenge in Pakistan. This study categorized serologically confirmed patients into Dengue fever (DF), Dengue hemorrhagic fever (DHF), and Dengue shock syndrome (DSS) subgroups. The research employs artificial neural network (ANN) modeling to establish the causal relationship between biochemical parameters and disease severity.

## **OBJECTIVE(S):**

1. To Investigate the association between biochemical parameters and disease severity in dengue-infected patients.
2. To utilize the ANN modeling for predictive analysis of disease severity based on biochemical markers.

## **METHODOLOGY:**

The study utilizes a five-input-node multi-layer perceptron for ANN modeling with the Tanh transfer function. Experimental values are compared with ANN predictions, demonstrating consistency despite minor differences (error values between -3.5% and +1.0%). The sample size was 268. Biochemical parameters, particularly aminotransferase and phosphatase levels, are analyzed in DF, DHF, and DSS patients. Liver biomarkers, including AST, ALT, and renal profiles, are investigated to discern patterns associated with disease severity.

## **RESULTS:**

Results affirm the effectiveness of ANN modeling, showing consistency with experimental values. A notable alteration in aminotransferase and phosphatase levels is observed in the majority of DF, DHF, and DSS patients. AST emerges as the most deranged liver biomarker, especially in DSS patients. Significant differences ( $p \leq 0.05$ ) are found in the mean levels of ALT and AST between control subjects and patients in all three subgroups. Renal profile investigations reveal gender-specific variations in urea and creatinine levels among DHF patients.

## **CONCLUSION:**

This study contributes to enhancing health staff awareness regarding the predictive role of different biomarkers in determining disease severity among dengue-infected patients.

## **KEYWORDS:**

Dengue, Disease Severity, Biomarkers, Artificial Neural Networks, Experimental Analysis.

## **REVISITING THE APPLIED ANATOMY IN RENAL MODULE 1**

**Alia Batool, Liaqat Ali, Sayeda Alishba Batool, Bibi Maleeha**  
Khyber Girls Medical College, Peshawar

### **INTRODUCTION:**

The variations in renal vascular supply significantly affect clinical urology. The research question is whether to modify renal module 1 for best educational impact.

### **OBJECTIVE(S):**

1. To study the variation in the renal vascular system in different urological surgeries.

### **METHODOLOGY:**

Ethical approval was sought by IREB of IKD/HMC. It is a descriptive study conducted in the Department of Urology IKD/KGMC from March 2022 to December 2023. Renal vasculature of 460 renal surgeries was included in the study by non-probability purposive sampling. The details of the procedure, presence, and type of variation in the renal artery and renal vein were recorded on structured proforma and were analysed on SPSS version 21.

### **RESULTS:**

Variation in the renal artery was found in 271 (59%) kidneys. Out of 271 patients, 143 (52.7 %) had multiple renal arteries, 52 (19.1%) kidneys had early branching of the renal artery, and 21 had a posterior inferior location of the renal artery concerning the renal vein. We recorded variation in renal veins in 55 (20.29%) of renal units. The renal vein on the right side was formed by two tributaries in 22 cases, additional renal veins in 30 kidneys on the left kidney, and a proximal double vein on the right side in 3 cases. There was no significant difference in cross-tabulation of renal vascular variation gender, laterality, age, disease, and nature of surgery

### **CONCLUSION:**

Variation in the Renal artery is more common than the renal vein. It is the time to revisit applied anatomy.

### **KEYWORDS:**

Anatomy, Urology, Renal Artery, Renal Vein, Applied anatomy

# **FIASCO OF ENERGY DRINKS ON NEUROPHYSIOLOGY OF URINARY BLADDER**

**Sayed Alishba Batool, Liaqat Ali, Alia Batool, Bibi Maleeha**  
Khyber Girls Medical College, Peshawar

## **INTRODUCTION:**

Energy drinks are used as CNS stimulants rich in caffeine, sugar, taurine and Amino acids. The true benefit of a variety of multiple energy drinks is still questionable but overuse of energy drinks is associated with changes in the neurophysiology of multiple vital organs including the urinary bladder.

## **OBJECTIVE(S):**

1. To compare the differences in Urodynamics of patients with overactive bladder on energy drinks versus no energy drinks.

## **METHODOLOGY:**

It is a randomized clinical trial that was conducted in Department of Urology at KGMC from Jan 2023 till December 2023. Total number of 80 patients with clinical features of overactive bladder was included in the study using WHO calculator. We excluded patients with cystitis, post-surgical patients or patient with known diagnosis of neurogenic bladder. The sample was then equally divided in two equal groups by lottery method. Group A: Comprising of 40 patients who gave history of taking energy drinks while in Group B, 40 patients who had no history of intake of energy drinks. Both the groups were subjected to Urodynamics study as mandatory investigation. The details were recorded on structured proforma and was analyzed on SPSS.

## **RESULTS:**

The mean age of the participants was  $25 \pm 6.6$  years. In group A, 28 (70%) patients showed significant change in cytometric findings of unstable bladder as compared to Group B with 8 patients with cytometric features of bladder instability ( $p=0.001$ ). The mean post void residual urine was high  $89 \pm 10.3$  in Group A versus  $43 \pm 8.6$ ml ( $p=0.001$ ). There was no significant difference Uroflowmetry in both groups.

## **CONCLUSION:**

The energy drinks adversely affect the neurophysiology of urinary bladder.

## **KEYWORDS:**

Over Active Bladder (OAB), Energy Drinks, Substance Use, Urodynamics.

# JUSTIFIED GUIDELINES TO ACHIEVE A DESIRABLE STATE (JUGAAD) IN CLINICAL UROLOGY

**Sarmad Ali**, Syed Jazib Ali  
Peshawar Medical College

## INTRODUCTION:

Justified guidelines to achieve a desirable state (JuGAAD) is a new term in the medical glossary. It is a non-conventional, frugal innovation to find an easy solution in surgical procedures using imagination with cost-effective and basic items. Almost every physician performs JuGAAD in clinical practice but it's seldom reported. So, we are reporting our series of JuGAAD surgery in clinical Urology.

## OBJECTIVE(S):

1. To study the effectiveness and safety of different JuGAAD in Clinical Urology.

## METHODOLOGY:

After the ethical approval by IREB of the Institute of Kidney Diseases Peshawar, this descriptive study was conducted in the department of Urology Team "C" from May 2023 till August 2023. A total of 88 different JuGAAD were performed during different Urological procedures. The sampling technique was nonprobability convenient sampling, the preoperative video detail and postoperative course were recorded for any complications on structured proforma and were analyzed on SPSS

## RESULTS:

Out of 88 JuGAAD, 45 were performed for difficult catheterization. The intraluminal guide wire was used in 20 while gliding over a guide wire was in 30 cases. Wide bore unused packed straw was used as JuGAAD in Mini PCNL in 15 cases as a second puncture. A special anatomic maneuver was performed for ureteral stenting in 10 cases. A Six-Fr simple feeding tube was used as a pusher in 10 cases for successful stenting. An Eight-Fr catheter was used to remove the Intraluminal clot in IVC during radical nephrectomy in 3 cases. No postoperative complications like hemorrhage, infection, and injury to adjacent structures were recorded in any case.

## CONCLUSION:

The innovative JuGAAD is equally safe and effective in clinical Urology in specialized hands

## KEYWORDS:

JuGAAD Surgery, Urology, Urethral Catheter, Renal tumor

# **EMBARKING ON THE VOYAGE OF RELIEF: UNVEILING THE NASAL SYMPHONY FOR MIGRAINE MASTERY**

**Hadia Imran**, Anamta Khalil  
Hamdard University, Karachi

## **INTRODUCTION:**

Within the domain of recurrent neurologic storms known as migraines—where headaches, light sensitivity, sound aversion, and the unsettling dance of nausea and vomiting take center stage—a new chapter in its effective treatment is unfolding. The protagonist in this tale is the venerable dihydroergotamine (DHE) mesylate, a stalwart combatant against migraine attacks traditionally administered orally or through parental guidance.

## **OBJECTIVE(S):**

1. To explore a refined nasal drug delivery system, a phenomenon known as POD—Precision Olfactory Delivery, marketed as DHE mesylate nasal sprays.

## **METHODOLOGY:**

206 adults over the age of 18 were asked to participate in a cross-sectional study in Karachi to provide information about their awareness, attitude, and knowledge. A Google questionnaire was used to assist in data collection, and SPSS software was then used for analysis to extract valuable insights from the data collected.

## **RESULTS:**

It pictures a waltz of easy patient administration, a choreography ensuring swift and reliable delivery to the upper nasal realm, mitigating the risk of medication loss. Marketed as DHE mesylate nasal sprays, POD emerges as the luminary, authorized for the immediate treatment of migraine.

## **CONCLUSION:**

The narrative unfolds as a testament to innovation, offering not just treatment but a harmonious fusion of efficacy and convenience, enriching the lives of those navigating the challenging landscape of migraine management.

## **KEYWORDS:**

Migraines, Dihydroergotamine, Precision Olfactory Delivery, Nasal Sprays.



# IMMEDIATE-RELEASE TABLETS WITH BLACK SEA MUSSEL SHELL-DERIVED CALCIUM LACTATE: A SYSTEMATIC REVIEW

Aiman Akhter, Dua Rizwan, Mahnoor Naz, Sofiya Ali Rajput, Jalal Ahmed  
Hamdard University, Karachi

## INTRODUCTION:

This study investigates the environmentally and economically viable process of producing immediate-release tablets using calcium lactate that is extracted from Black Sea mussel shells. The research focuses on using lactic acid and other calcium sources, like oysters, mussels, and crabs, to create calcium lactate. The idea is to use mussel shells to make calcium lactate for use in pharmaceuticals in an economical and environmentally responsible way.

## OBJECTIVE(S):

1. To identify the best conditions for the physicochemical characterization of the calcium lactate obtained from Black Sea mussel shells and the incorporation of the produced calcium lactate into immediate-release tablets.
2. To evaluate the characteristics of these tablets against commercially accessible direct compressible calcium lactate (PURACAL).

## METHODOLOGY:

This research employs a comprehensive approach, conducting a systematic review and meta-analysis of literature about the utilization of Black Sea Mussel Shell-derived Calcium Lactate in the development of immediate-release tablets. The study extensively utilizes online databases, scholarly repositories, and scientific journals. Primary tools for investigation encompass advanced literature search engines such as PubMed, academic databases, and inclusion/exclusion criteria to discern relevant data and insights.

## RESULTS:

The physicochemical properties of the produced calcium lactate are described in the findings section, with special attention paid to its unique firewood-like crystal shape and thermal breakdown profile. The results include an assessment of immediate-release tablets including calcium lactate derived from Black Sea mussel shells. This study highlights the effectiveness of the green synthesis approach and compares the attributes of these tablets with those of PURACAL®.

## CONCLUSION:

The study supports mussel shell by-products as a sustainable calcium source for pharmaceutical applications due to their high solubility and bioavailability, promoting future advancements in marine organisms.

## KEYWORDS:

Black Sea Mussel Shells, Immediate-release tablets, Solubility Optimization.

# REVOLUTIONIZING DIABETES MANAGEMENT: TRANSDERMAL INSULIN DELIVERY

Rubaisha Khan, Aliza Shaikh, Fabiha Fatima, Neha Nadeem  
Hamdard University, Karachi

## INTRODUCTION:

Diabetes mellitus is a metabolic disease that is typified by increased hepatic glucose synthesis and decreased absorption of glucose, resulting in abnormal blood glucose buildup. Both type 1 and type 2 diabetes are characterized by low insulin production or a reduced sensitivity to insulin. The problems with conventional insulin treatment, which is frequently subcutaneous, include invasiveness and hypoglycemic episodes. Extended-release, low variability and improved patient compliance are all benefits of transdermal insulin administration. Numerous techniques are being investigated for their possible effectiveness, including vesicular formulations, microemulsions, nanoparticles, microdermabrasion, sonophoresis, patches, electroporation, and chemical enhancers.

## OBJECTIVE(S):

1. To explore the transdermal insulin administration techniques for diabetes management.
2. To examine their benefits and drawbacks, including vesicular formulations, sonophoresis, patches, electroporation, iontophoresis, microemulsions, nanoparticles, and future developments.

## METHODOLOGY:

A cross-sectional study conducted in Karachi evaluated the knowledge, attitudes, and awareness of 205 adults aged 18 and older about transdermal insulin administration methods using a Google questionnaire and IBM SPSS software to contribute to the evolving knowledge on diabetes treatment. A random sampling technique was used to determine the sample size. Common quantitative analysis techniques include descriptive statistics (mean, median, mode), inferential statistics (t-tests, ANOVA, regression) and correlation analysis, and also random sampling technique.

## RESULTS:

This study explores the potential of transdermal insulin delivery as a substitute for traditional diabetes care techniques, highlighting its benefits like improved patient compliance and continuous medication release, which could become more beneficial in the future.

## CONCLUSION:

With additional research, the study reveals the safety and possibility of widespread usage of transdermal insulin delivery strategies for managing diabetes.

## KEYWORDS:

Chronic Disease, Diabetes, Insulin, Stratum Corneum, Transdermal.

# EXPLORING THE THERAPEUTIC POTENTIAL OF FAMOTIDINE: AN INNOVATIVE APPROACH IN ACID TREATMENT

Rubab Majid, Armish Altaf, Ayesha Shaikh  
Hamdard University, Karachi

## INTRODUCTION:

Famotidine, classified as a histamine H2 receptor antagonist, engages in a complex molecular discourse central to the intricate landscape of treating acid reflux. This abstract thoroughly examines the nuanced pharmacodynamics, shedding light on receptor-binding kinetics, downstream signaling cascades, and their intricate interplay in the modulation of gastric acid secretion.

## OBJECTIVE(S):

1. To comprehensively investigate the therapeutic efficacy of Famotidine in acid reflux management and understand its impact on acid secretion modulation, receptor selectivity, and its emerging role in personalized treatment.

## METHODOLOGY:

From October'20 to December'21, a cross-sectional survey in Karachi engaged 206 participants aged 18 and above to evaluate their knowledge, attitude, and awareness. Rigorous random probability sampling was employed for participant selection. Data collection utilized a Google questionnaire, and analysis was conducted using SPSS software.

## RESULTS:

The result of the abstract indicates a comprehensive and multifaceted study that aims to explore the therapeutic efficacy of Famotidine in managing acid reflux, with a particular focus on its mechanisms, receptor selectivity, and personalized treatment approaches.

## CONCLUSION:

The study provides an initial exploration into the correlation between academic stress, lifestyle, and Famotidine use among students in Pakistan. The expected result is an enhanced understanding of gastrointestinal health in this demographic, offering valuable insights for targeted healthcare strategies addressing the unique challenges faced by students in the region.

## KEYWORDS:

Famotidine, Gastroesophageal Reflux Disease (GERD), Histamine, Pharmacodynamics, Pharmacokinetic.

# **UNRAVELING THE INTENSIFIED IMPACT OF MINOR INFECTIONS: UNDERSTANDING THE DETRIMENTAL CONSEQUENCES OF SEASONAL FACTORS IMPACTING THE IMMUNE SYSTEM**

**Hafsa Ayaz**, Areeba Moin, Abdul Moiz  
Hamdard University, Karachi

## **INTRODUCTION:**

Over the past 3 to 4 years, a marked rise in the severity of seasonal and viral infections, coinciding with the COVID-19 pandemic, prompts a study investigating the causes behind this escalation. The rationale is to gain insights with broader implications for public health in addressing the increased intensity of symptoms.

## **OBJECTIVE(S):**

1. To explore the causes of severity of minor viral infections.
2. To understand the factors behind viral mutations, weakened immune system due to COVID-19, antibiotics-related lifestyle changes, and the impact of seasonal changes and global warming on infectious disease.

## **METHODOLOGY:**

This is a review-based observational descriptive study focusing on the last 10 years that includes approx. 20 to 25 research papers and studies. The sampling technique involves a systematic search and retrieval of articles from major academic databases, which include Google Scholar, Cochrane Library, PubMed, NIH, and Science Direct engines. The study encompasses a global perspective, utilizing data from diverse geographical locations.

## **RESULTS:**

Studies show that the escalation in symptom severity over time is attributed to factors such as antibiotic overuse diminishing immunity, lifestyle changes impacting immune responses, climate change affecting human health, and global warming increasing variants in minor infections. The findings underscore the need for interventions to counter these adverse effects and suggest preventative measures.

## **CONCLUSION:**

This research contributes to the advancement of knowledge in the field of viral and seasonal infections. By unraveling the intricate factors contributing to increased infection severity, the study offers a pathway to improve public health outcomes.

## **KEYWORDS:**

Seasonal factors, Viral mutations, Immune system, Disease susceptibility, Environmental changes.

# **BOUNTIFUL BOTANICAL BRILLIANCE: FORMULATING A PURELY HERBAL PRESSED BALM SERUM FOR NOURISHED AND RADIANT SKIN**

**Omema Sarwar**, Areeba Moin  
Hamdard University, Karachi

## **INTRODUCTION:**

This study delves into the resurgence of aloe vera and mulberry extract in skincare, emphasizing their integration into an innovative pressed serum. This groundbreaking serum signifies a transformative evolution in skincare routines by seamlessly merging serum concentration with moisturizing comfort, targeting fine lines, hydration, and overall skin vitality.

## **OBJECTIVE(S):**

1. To introduce a revolutionary pressed serum that combines concentrated serum benefits with moisturizing properties, utilizing aloe vera and mulberry extract.
2. To harmonize traditional skincare wisdom with modern science and establish cost-effectiveness tailored to the economic context of the Pakistani market.

## **METHODOLOGY:**

In the Hamdard University lab, we developed a pressed balm serum over 2 months, involving diverse students in research, development, and testing. With 35 participants, comprehensive data analysis assessed consistency, texture, appearance, and patch tests. The systematic study prioritized serum stability and consistency over time.

## **RESULTS:**

The pressed balm serum, enriched with aloe vera and mulberry extract, proves remarkably effective in addressing fine lines, and antioxidants, enhancing hydration, and promoting overall skin vitality. Locally sourced ingredients contribute to cost-effectiveness, making advanced skincare accessible to a wider audience.

## **CONCLUSION:**

The synergy between tradition and modernity in the pressed balm serum offers a comprehensive solution to skincare needs. This cost-effective approach ensures accessibility in the Pakistani market, underscoring the significance of preserving traditional wisdom in skincare.

## **KEYWORDS:**

Aloe vera, Mulberry Extract, Pressed Serum, Fine Lines, Hydration, Economic Considerations, Traditional Wisdom, Pakistani Market.

# **A HYDROPHILIC SERUM INFUSED WITH NATURE'S ANTIOXIDANT BOUNTY FOR RADIANT SKIN RENEWAL**

**Laiba Tanveer**, Abdul Moiz  
Hamdard University

## **INTRODUCTION:**

This research presents a novel skincare serum crafted from carefully chosen natural botanical extracts, catering to the rising need for sustainable beauty products. The formulation prioritizes therapeutic attributes like antioxidants, anti-inflammatory agents, moisturizers, and a cooling effect.

## **OBJECTIVE(S):**

1. To craft a potent serum for beauty solutions with therapeutic properties.
2. To synergize the rejuvenating power of mulberry extract for anti-aging and antioxidant benefits, combating free radicals.
3. To ensure optimal moisturization, soothing, and a cooling effect through Aloe vera, contributing to a supple and youthful complexion

## **METHODOLOGY:**

It is a randomized control trial. The hydrophilic serum was formulated at Hamdard university spanned 3 months, encompassing thorough research, development, and testing phases, involving a diverse group of university students to comprehensively assess compatibility. A thoughtful sample size of 42 participants was chosen considering practical constraints. Data analysis, including consistency, texture, and appearance tests provided a comprehensive understanding of serum performance. The study design prioritized a systematic and practical approach, ensuring serum consistency and stability over time.

## **RESULTS:**

Hydrophilic serum with mulberry extract and Aloe vera combats fine lines, boosts hydration, and revitalizes the skin. Locally sourced ingredients enhance cost-effectiveness, expanding accessibility in the diverse Pakistani skincare market.

## **CONCLUSION:**

The research introduces a sustainable serum for the skincare industry. The cost-effective solution blends tradition and modernity, addressing diverse skincare needs and preserving traditional wisdom in the Pakistani market.

## **KEYWORDS:**

Aloe vera, Mulberry Extract, Antioxidant, Cooling Effect.

# **CUSTOMIZING CARE: THE ERA OF PERSONALIZED PHARMACOGENOMICS**

**Hafsa Ayaz, Areeba Moin, Omema Sarwar, Dua Nisar**  
Hamdard University

## **INTRODUCTION:**

Pharmacogenomics is a dynamic and evolving field that involves the study of how genes affect a person's response to drugs. Emphasizing its transformative impact on personalized medicine. Also highlights the key role of the Personalized Medicine Coalition (PMC) in advancing targeted therapies within precision medicine.

## **OBJECTIVE(S):**

1. To delve into the potential and implications of pharmacogenomics for personalized medicine.
2. To explore how genetic profiling can aid clinicians in identifying effective approaches to preventing, diagnosing, treating, and managing various diseases.
3. To emphasize the role of genetic testing and the identification of genetic variations associated with treatment responses.

## **METHODOLOGY:**

This is a review-based observational descriptive study focusing on the last 20 years. The sampling technique involves a systematic search and retrieval of articles from major academic databases, which include Google Scholar, Cochrane Library, PubMed, NIH, and Science Direct engines. The study encompasses a global perspective, utilizing data from diverse geographical locations

## **RESULTS:**

The results highlight the potential of personalized medicine in revolutionizing treatment approaches for specific diseases. The focus is on cancer, cardiovascular diseases, neurological disorders, infectious diseases, and autoimmune disorders.

## **CONCLUSION:**

The study concludes by summarizing key insights and highlighting the transformative impact of pharmacogenomics on future healthcare landscapes. The challenges identified, including genetic variability, data interpretation, cost and accessibility, and ethical considerations, are acknowledged. The conclusion emphasizes the need for collaborative efforts, advancements in technology, clarification of legal and ethical concerns, healthcare professional education, and public awareness to further the field of personalized medicine.

## **KEYWORDS:**

Pharmacogenomics, Personalized medicine, Genetic profiling, Targeted therapies, Genetic variations.

# **NANOTECHNOLOGY IN PHARMACEUTICAL INNOVATIONS FOR ADVANCED DRUG DELIVERY SYSTEMS: A SYSTEMATIC REVIEW**

**Muhammad Ubaid Akram, Muhammad Anas**  
Hamdard University, Karachi

## **INTRODUCTION:**

Nanotechnology is about employing materials and devices at a tiny scale, involving their design, creation, analysis, and use. In pharmaceutical sciences, these specialized materials and devices are innovated to interact accurately with cells and tissues at a level of molecules.

## **OBJECTIVE(S):**

1. To comprehensively collect and assess a wide array of published literature concerning the utilization of nanotechnology in advanced drug delivery systems within pharmaceutical sciences.
2. To explore the enhancement of drug solubility, absorption rates, and bioavailability through nanotechnology-based formulations.
3. To assess prevailing challenges and issues linked to nanomaterials, with a focus on identifying specific areas requiring additional research and development efforts.

## **METHODOLOGY:**

The methodology involves a systematic review and meta-analysis of existing literature focusing on the application of nanotechnology in advanced drug delivery systems. The study will be conducted utilizing online databases, scholarly repositories, and scientific journals. Primary tools for this study will include sophisticated literature search engines (e.g. PubMed), academic databases, and inclusion/exclusion criteria to identify.

## **RESULTS:**

The results aim to show that these tools significantly improve drug targeting, enhance pharmacokinetics and bioavailability, and improve the effectiveness of treatments by precisely delivering therapeutics to specific biological targets.

## **CONCLUSION:**

This technology offers a promising avenue for managing toxicity in certain conditions, where drug toxicity from chemotherapy is a primary concern. Despite their significance, the potential toxicity of various nanoparticles utilized in drug delivery systems remains a substantial concern. Hence, it's vital to identify and evaluate the toxic traits of these nanomaterials.

## **KEYWORDS:**

Nanoscale Materials, Targeted Therapy, Minimized Toxicity, Therapeutic Efficacy



# THROMBOCYTOPENIA PREVALENCE AND SEVERITY ASSESSMENT IN PLASMODIUM VIVAX MALARIA PATIENTS

**Muhammad Nouman Khan**, Roman Wazir, Muhammad Younas, Waqas Fazal, Khalid Nawaz, Iqra Shaheed Benazir Bhutto Women's University Peshawar

## INTRODUCTION:

Thrombocytopenia, characterized by reduced platelet counts, is a known consequence of various malaria infections. Nevertheless, its occurrence and clinical significance in Plasmodium vivax malaria have received limited attention. While thrombocytopenia and anemia are frequently observed abnormalities.

## OBJECTIVE(S):

1. To assess thrombocytopenia in Plasmodium vivax malaria patients, providing insights into the risk of severe thrombocytopenia.

## METHODOLOGY:

This descriptive cross-sectional study was carried out at Lady Reading Hospital in Peshawar, Pakistan. A total of 297 cases were included in the study using a consecutive nonprobability sampling method. Patients of both genders between ages 18 to 60 years, with smear-positive vivax malaria who had a fever exceeding 100 degrees Fahrenheit for at least one day were included. Confounding factors were managed through strict adherence to exclusion criteria.

## RESULTS:

Thrombocytopenia was highly prevalent among Vivax Malaria patients, affecting 82.83% of cases, with 17.17% remaining unaffected. Most patients experienced mild or moderate thrombocytopenia, while severe cases were rare (1.35%). Analysis by age revealed a slight increase in older patients. Prevalence of thrombocytopenia was 80.9% for  $\leq 30$  years, 81.4% for 31-40 years, 84.5% for 41-50 years, and 89.5% for  $> 50$  years. Gender-based analysis showed a slightly higher prevalence in females (83.2%) versus males (82.6%), though not statistically significant.

## CONCLUSION:

These findings highlight the importance of monitoring platelet counts and comprehending the clinical significance of thrombocytopenia in vivax malaria management. Further research is needed to gain a comprehensive understanding of the underlying mechanisms and clinical implications of thrombocytopenia in vivax malaria. Keywords: Malaria, Plasmodium Vivax, Thrombocytopenia, Disease Severity

## KEYWORDS:

Malaria, Plasmodium Vivax, Thrombocytopenia, Disease Severity.

# **EXPLORING THE BELIEFS AND EXPECTATIONS OF PESHAWAR PHYSICIANS: A COMPREHENSIVE ANALYSIS OF TELEMEDICINE THROUGH QUESTIONNAIRE INSIGHTS**

**Mansoor Ahmad Khan, Maryam Afridi, Merium Ali**  
Rehman Medical College, Peshawar

## **INTRODUCTION:**

Services related to telemedicine are steadily becoming an essential component of the healthcare systems of many nations worldwide. Even yet, its acceptance hasn't been particularly widespread in clinical settings in less developed countries, where there is a chronic lack of practicing medical experts.

## **OBJECTIVE(S):**

1. To determine how willing Peshawar doctors were to accept and use telemedicine as a potential practical aid in their day-to-day work.

## **METHODOLOGY:**

It was a cross-sectional study, in which physicians from different private and public hospitals in Peshawar, were asked to fill out the questionnaire, based on their expectations and beliefs regarding telemedicine. Random sampling was done which included sixty doctors, who responded to the survey. The participants had a mean age of 44 years and 18 years of professional experience. Statistical analysis was done using SPSS.

## **RESULTS:**

A small percentage of respondents (54.4%) stated they didn't use the Internet at work, and 82.4% had never taken part in a telemedicine project, although 87.6% indicated they would be willing to consider it in the future. According to 73.5% of respondents, the primary challenge encountered during the deployment of telemedicine was the belief that patients would rather have in-person interactions with doctors.

## **CONCLUSION:**

Future telemedicine initiatives about online education, remote management of chronic illnesses, online specialist communication, and real-time image and data transfer have garnered significant interest from the participants. Although they still prefer in-person patient interaction, the majority of doctors in Peshawar have not used telemedicine in clinical practice. However, they would be interested in using it in the future for things like online teaching or disease control.

## **KEYWORDS:**

Telemedicine, Questionnaire, E-health, Distance Control.

# COMPARATIVE STUDY OF *RICINUS COMMUNIS* AND *CUSCUTA REFLEXA* EXTRACTS EFFECTS TOWARDS MULTI-DRUG RESISTANT UROPATHOGENIC BACTERIA

Waqar Ahmad, Aleem Ullah, and Safi Ullah  
Abasyn University, Peshawar

## INTRODUCTION:

Urinary tract infections (UTIs) are very common infections in the human population. The *Ricinus communis* and *Cuscuta reflexa* are medicinal plants found in Pakistan that are used as traditional medicine.

## OBJECTIVE(S):

1. To isolate Multi Drug Resistant (MDRs) uropathogenic bacteria.
2. To explore the antibacterial activity of *R. communis* and *C. reflexa* against MDR bacteria.

## METHODOLOGY:

The leaves of both plants were collected from District Khyber, Khyber Pakhtunkhwa, and extracted with methanol. A total of 100 UTI midstream urine samples were obtained from Al-Khidmat Hospital, Peshawar by using sterile urine kits and were processed at the Microbiology Research Laboratory, Abasyn University Peshawar for MDR bacteria isolates and SPSS 16.0 version was used for data analysis. This study duration was from June-December, 2023.

## RESULTS:

Out of 100 urine samples, 75% were positive, among positive cases 60% from female, while 40% were male patients. The isolated bacteria were *Escherichia coli*, *Proteus mirabilis*, *Klebsiella pneumoniae*, *Acinetobacter baumannii*, and *Staphylococcus aureus*. For bacterial MDR confirmation different antibiotics like Ceftriaxone, Gentamicin, Ciprofloxacin, Levofloxacin and Ampicillin were used. Plants methanolic extracts were evaluated for antibacterial activity. Among the extracts, *R. communis* was more effective against *E. coli* (28mm), *K. pneumonia* (20mm), *P. mirabilis* (18mm), *A. baumannii* (17mm) and *S. aureus* (15mm). Similarly, *C. reflexa* showed more effective against *E. coli* (23mm), *K. pneumonia* (22mm), *P. mirabilis* (19mm), *A. baumannii* (15mm), and *S. aureus* (13mm), respectively.

## CONCLUSION:

It is concluded that both plant extracts possess different bioactive constituents which showed good antibacterial activity.

## KEYWORDS:

Plant extracts, UTIs, Antibiotics, MDR bacteria, Antibacterial Activity.

# **ACUTE KIDNEY INJURY DEVELOPMENT FOLLOWING SURGICAL REPAIR OF STANFORD TYPE A AORTIC DISSECTION IS ASSOCIATED WITH INCREASED MORTALITY: A SYSTEMATIC REVIEW AND META-ANALYSIS**

**Aman Goyal**, Surabhi Maheshwari, Yusra Mashkoor, Haleema Qayyum Abbasi, Urooj Shamim, Mahla Chambari, Arjun Kelaiya, Irfan Ullah, Mohamed Daoud, Amir Humza Sohail  
Ayub Medical College, Abbottabad

## **INTRODUCTION:**

Acute kidney injury (AKI) is a common complication following surgical intervention for Stanford Type A aortic dissection (TAAD).

## **OBJECTIVE(S):**

1. To clarify the prognostic significance of AKI in patients who have undergone surgical repair of TAAD, by understanding its effects on the risk of mortality and several other outcomes.

## **METHODOLOGY:**

A literature search was conducted using PubMed, EMBASE, and Google Scholar. The primary endpoint was 30-day mortality, with secondary endpoints including stroke, dialysis/CRRT, cardiovascular, and respiratory complications. Statistical significance was set at  $p < 0.05$ . Random-effects meta-analysis were performed for all the outcomes.

## **RESULTS:**

Our analysis included 21 studies comprising 10396 patients. Patients with AKI exhibited a significantly higher risk of 30-day mortality (RR = 3.98, 95% CI: 3.04–5.22,  $p < 0.00001$ ), stroke (RR = 2.05, 95% CI: 1.68–2.50,  $p < 0.00001$ ), dialysis/CRRT (RR = 32.91, 95% CI: 10.39–104.24,  $p < 0.00001$ ), cardiovascular complications (RR = 2.85, 95% CI: 1.65–4.92,  $p = 0.0002$ ), respiratory complications (RR = 2.13, 95% CI: 1.16–3.91,  $p = 0.02$ ) and sepsis (RR = 4.92, 95% CI: 2.62–9.24,  $p < 0.00001$ ) and a significantly longer hospital and ICU stay compared to those without AKI. No significant differences were observed in sternal wound infection, need for tracheostomy, risk of paraplegia, or hepatic failure between the two groups.

## **CONCLUSION:**

Patients with AKI demonstrated a significantly increased risk of mortality, stroke, need for dialysis/CRRT, postoperative cardiovascular and respiratory complications, sepsis, and a significantly longer duration of hospital and ICU stay.

## **KEYWORDS:**

Acute Kidney Injury, Aortic Dissection, Cardiothoracic Surgery, Meta-Analysis.

# **ASSESS THE FREQUENCY OF CYTOMEGALOVIRUS (CMV) IN KIDNEY TRANSPLANT PATIENTS IN TERTIARY CARE HOSPITAL, PESHAWAR**

**Mansoor Ahmad Khan**, Tanveer Ahmed, Maria Seemab  
Rehman Medical Institute (RMI), Peshawar

## **INTRODUCTION:**

Cytomegalovirus (CMV) infection poses a significant challenge in kidney transplantation, potentially jeopardizing graft function and overall patient well-being.

## **OBJECTIVE(S):**

1. To identify the frequency of CMV infection in kidney transplant patients.

## **METHODOLOGY:**

A cross-sectional descriptive study was done at Rehman Medical Institute, Peshawar from Aug 2023 to Oct 2023. A total of 213 kidney transplant recipients were included in the study, chosen using systematic random sampling. Inclusion criteria encompassed individuals who had successfully undergone kidney transplantation at RMI hospital. Demographic and clinical data were obtained from medical records, covering factors such as age, gender, and transplant date. The prevalence of CMV infection was determined through laboratory tests, with a particular emphasis on Quantitative Polymerase Chain Reaction (PCR) assays capable of detecting CMV DNA in various materials. Data was analysed through SPSS version 29.

## **RESULTS:**

The results of the study demonstrated a notably higher prevalence of CMV infection among male kidney transplant patients. This disparity was especially prominent in the 18-35 years age group. Additionally, a significant prevalence of CMV was observed in patients aged 36-66 years.

## **CONCLUSION:**

The findings underscore the significance of gender and age in the context of CMV infection among kidney transplant patients. These insights prompt the need for tailored preventative and therapeutic strategies in the management of kidney transplant recipients at Rehman Medical Institute and potentially in similar contexts.

## **KEYWORDS:**

CMV, Kidney Transplant, RMI.

# **PATTERNS OF CORONARY ARTERY OBSTRUCTION ON CORONARY ANGIOGRAPHY**

**Izza Ahmad**, Aman Salaam Ahmad, Salman Randhawa, Haris Khan  
Shalamar Medical and Dental College

## **INTRODUCTION:**

Coronary artery disease, caused by factors like age and smoking, leads to an oxygen supply-demand mismatch. In Pakistan, 1 in 4 middle-aged adults is affected, emphasizing the urgent need for cardiovascular research in South Asia.

## **OBJECTIVE(S):**

1. To determine the number of coronary vessels blocked or narrowed.
2. To determine the percentage of type of vessels blocked or narrowed.
3. To assess the site of coronary vessels blocked.

## **METHODOLOGY:**

This retrospective and observational study was conducted at the cardiology department of Shalamar Hospital, Lahore from April 2023 to July 2023 after approval from IRB. Socio-demographic data of 300 patients was collected using a randomized sampling technique and recorded on a proforma designed for the study. The coronary angiographic findings (i.e., number, site, and extent of coronary vessels blocked) were recorded and data was analysed by using SPSS version 24.

## **RESULTS:**

Among 300 subjects, 38.3% had triple vessel disease. Of these, 81 were males and 34 were females. The left anterior descending artery was predominantly blocked (80%), followed by the right coronary artery (61%), with higher occurrence in the middle segment compared to proximal and distal segments (52.2%, 43.5%, and 12.6%, respectively).

## **CONCLUSION:**

Triple vessel blockage was more common in males than females. The left anterior descending artery was found to be more blocked than any other coronary artery at the middle segment.

## **KEYWORDS:**

Coronary Artery Obstruction, Angiography, Vessel Blockade.

# **RETINAL ASSESSMENT IN DIABETIC PATIENTS PRESENTING WITH AND WITHOUT VISUAL COMPLAINTS TO A DIABETIC CLINIC AT TERTIARY CARE HOSPITAL**

**Aalian Ubaid**

Shalamar Institute of Medical Sciences, Lahore

## **INTRODUCTION:**

Diabetes mellitus entails various microvascular and macrovascular complications. Diabetic retinopathy is the predominant microvascular complication, emerging as the primary cause of visual impairment. Awareness of the insidious ocular changes in diabetic patients is generally lacking until the onset of retinopathy. Timely assessment of individuals with an extended diabetic history holds the potential to enhance prognosis and outcomes significantly.

## **OBJECTIVE(S):**

1. To determine the retinal changes in diabetic patients presenting to a diabetic clinic
2. To determine if there is any difference in the retinal examination between subjects presenting with visual complaints compared to those without any complaints.
3. To correlate the changes in the retina with HbA1C levels

## **METHODOLOGY:**

A three-month cross-sectional study was conducted on 100 patients, 57% females, and 43% males, with a 10-year history of Type 1 and 2 Diabetes Mellitus, with and without ocular complaints. Participants were assessed for HbA1c and fasting blood glucose levels after obtaining informed consent. Eye screening included a visual acuity test, fundus examination, and bio-microscopy following pupil dilation with 0.01% atropine sulfate. Statistical analysis was performed using SPSS version 24.

## **RESULTS:**

Our analysis revealed that the mean difference lacked statistical significance when comparing patients with severe non-proliferative DR to those with mild or moderate non-proliferative DR. 70 individuals presented with visual complaints while 30 with no visual complaints. 30 individuals had non-apparent DR. 70 had non-proliferative DR. There was a statistically significant correlation between HbA1C levels and changes in the retina.

## **CONCLUSION:**

Our research indicates a higher prevalence of non-proliferative DR compared to proliferative DR in individuals with diabetes mellitus. Emphasizing the screening and management of diabetic retinopathy is crucial.

## **KEYWORDS:**

Diabetic Retinopathy, Diabetes Mellitus, HbA1C levels.

# **LAPAROSCOPIC VERSUS OPEN PANCREATICODUODENECTOMY FOR PANCREATIC DUCTAL ADENOCARCINOMA (PDAC): A SYSTEMATIC REVIEW & META-ANALYSIS**

**Abeer Shahzad**, Moaaz Sultan, Shajie ur Rehman, Bilal Islam, Saad Sohail, Syeda Hoorulain Ahmed, Dr. Saad Choudhry  
Dow Medical College, Karachi

## **INTRODUCTION:**

Pancreatic ductal adenocarcinoma (PDAC) is a type of cancer that originates in the epithelial cells and is the most prevalent malignant tumor affecting the pancreas, representing over 85% of all pancreatic cancers.

## **OBJECTIVE(S):**

1. To compare safety and clinical outcomes between laparoscopic (LPD) and open pancreaticoduodenectomy (OPD) for resectable or borderline resectable pancreatic ductal adenocarcinoma (PDAC).

## **METHODOLOGY:**

A comprehensive literature search across Cochrane Library, PubMed, and Google Scholar was done up to March 2023, which identified the data in five categories: patient demographics, operative details, complications, postoperative outcomes, and clinicopathological findings. Risk of Bias was assessed by SURU and confirmed by MS and SS using the Cochrane tool. Subsets included patient demographics, intra-operative factors, complications, postoperative outcomes, and histopathological criteria. Analysis used Review Manager Version 5.4 (3).

## **RESULTS:**

10 retrospective studies across various countries (USA, China, Vietnam, Italy) indicate that LPD offers advantages over OPD for PDAC. LPD demonstrated benefits including reduced blood loss (mean difference: -0.11, 95% CI: -0.48 to 0.26), fewer patients needing blood transfusions (RR: 0.58, 95% CI: 0.44-0.76), and lower lung complications (RR: 0.42, 95% CI: 0.15-1.21). LPD showed decreased incidents of hemorrhage, bile leaks, and lymph node dissection, and a lower patient mortality rate. However, LPD was associated with a longer postoperative hospital stay, and more patients required re-operation. Operative time did not significantly differ between the two approaches.

## **CONCLUSION:**

Our study supports the use of laparoscopic pancreaticoduodenectomy for pancreatic ductal adenocarcinoma, highlighting advantages in blood loss, complications, and patient survival.

## **KEYWORDS:**

Pancreaticoduodenectomy, Adenocarcinoma, Complications.



# **OBSTRUCTIVE SLEEP APNEA AS A CONSEQUENCE OF GROSS MOTOR AND NEUROLOGICAL DYSFUNCTION IN CHILDREN WITH CEREBRAL PALSY**

**Maaz Bin Zahid**, Sunnia Shah, Muhammad Luqman, Hassaan Muhammad, Sakhshe Kumari  
Khyber Medical College, Peshawar

## **INTRODUCTION:**

Cerebral palsy (CP) refers to a group of neurological disorders that permanently affect bodily movement and coordination. Obstructive sleep apnea is the leading cause of death in children with CP. Feared consequences of CP are the limitation of gross movements and nervous dysfunction. There is a gap in the literature that fails to explain the characteristics of CP about OSA with gross motor and neurological dysfunction.

## **OBJECTIVE(S):**

1. To find the strength and direction of the relationship between OSA and gross motor and neurological dysfunction.

## **METHODOLOGY:**

A cross-sectional study was conducted in Peshawar from June 2023 to August 2023 on 250 patients suffering from CP. The scales used were the pediatric sleep questionnaire and the GMFCS scale. The sampling technique was non-probability convenience sampling. Statistical tests included chi-square analysis and multivariate logistic regression.

## **RESULTS:**

Out of the 250 patients, 146 (58.4%) were male. 94 (37.6%) patients had an age category of 6- <12 years. The frequency of consanguinity was 143 (57.2%). 121 (48.4%) of the patients suffered from OSA. 82 (32.8%) patients had GMFCS 5 levels of motor dysfunction. The factors associated with OSA were the mode of delivery ( $X^2=1.14$ ,  $p=0.02$ ), and consanguinity ( $\chi^2=5.05$ ,  $p=0.02$ ). Other risk factors were the highest level of motor dysfunction, like GMFCS 5 ( $p=0.02$ ); OR: (95% CI), 2.9: (1.1-7.7), and the highest level of neurological dysfunction, like severe ( $p=0.0$ ); OR: (95% CI), 2.9: (1.4-6.0).

## **CONCLUSION:**

Our study suggests a strong and positive relationship between OSA and gross motor and neurological dysfunction.

## **KEYWORDS:**

Cerebral Palsy, Motor Dysfunction, Sleep Apnea.

# COMPARATIVE ASSESSMENT OF MODE OF DELIVERY IN RELATION TO DISEASES IN CHILDREN (AGE ≤ 6 YEARS)

**Bilal Ahmad**, Ali Asaam, Sami Ullah, Fazal Subhan, Sana Haider  
CECOS University of IT & Emerging Sciences, Peshawar

## INTRODUCTION:

Choosing the safest method of delivery and preventing preterm labor to reduce the number of preterm births and improve the outcomes for mother and baby is an obstetric challenge. There are two types of delivery, normal vaginal delivery (NVD) and cesarean section delivery (CS). A vaginal delivery is the birth of a baby through the vagina. A cesarean section more commonly known as C-section is the surgical delivery of a baby.

## OBJECTIVE(S):

1. To assess the mode of delivery i.e., Normal Vaginal Delivery vs. Cesarean Section concerning diseases in children for their prevalence.

## METHODOLOGY:

A retrospective study was designed and carried out in Pediatrics Wards of three major government hospitals of Peshawar namely Lady Reading Hospital (LRH), Hayatabad Medical Complex (HMC), and Khyber Teaching Hospital (KTH). Total 260 cases were collected (NVD=215, CS=45). A comprehensive self-structured questionnaire which contained items related to the mode of delivery information was prepared and employed for data collection.

## RESULTS:

Two groups of children (N=260, NVD=215, CS=45) were compared and difference in the percentages of diseases were found as described, AGE (NVD=5.6%, CS= 22.2%), pneumonia (NVD=14%, CS=20%), LRTI (NVD=8.8%, CS=28.9%), bronchiolitis (NVD=1.4%, CS=4.4%), meningitis (NVD= 10.7%, CS=11.1%), cardiomyopathy (NVD=0.9%, CS=2.2%).

## CONCLUSION:

The safest mode of delivery is normal vaginal delivery. Children who were born by cesarean delivery were more prone to diseases compared to the normal delivery system.

## KEYWORDS:

Normal vaginal delivery, Cesarean Delivery, Acute Gastroenteritis, Bifidobacteria.

# ARTIFICIAL INTELLIGENCE LUNG ABNORMALITY DIAGNOSTIC MODEL

Syed Hassan Boo Muhammad Jaffry, Mishgan Fatima, Sajida Mazhar, Jawad Shezad  
Nowshera Medical College, Nowshera

## INTRODUCTION:

Early detection of lung abnormalities using chest X-rays is essential for rapid diagnosis. They act as screening tools for high-risk people, track the progression of the disease, and provide useful diagnostic information.

## OBJECTIVE(S):

1. To develop an AI model that can accurately diagnose 14 diseases using chest X-rays.

## METHODOLOGY:

The NIH Chest X-ray Database, which has 121,000 classified Frontal Chest-X-Ray, was used to gather data. Convolutional neural networks based on DenseNet architecture were trained as part of our study design. Training (70%), testing (20%), and validation (10%) sets were created from the sample. Model training, evaluation, and validation were the main goals of this division. To ensure that the data were representative, we randomly assigned each set inside our sampling technique. The technique of gathering data involved extracting features from chest X-ray pictures so that the CNN could learn from them and then classify the images using the pre-established architecture.

## RESULTS:

In this study, we have presented an AI model that can detect 14 lung abnormalities i.e., Infiltration, effusion, Atelectasis, Nodule, Consolidation, Pneumothorax, Cardiomegaly, Fibrosis, Pleural Thickening, Mass, Emphysema, Edema, Pneumonia, Hernia. We developed a model and trained it using 121,000 chest X-ray pictures from the extensive NIH collection. Which enabled our model to accurately learn and recognize a wide range of illnesses.

## CONCLUSION:

Our model shows promise for assisting in the quick and accurate identification of lung anomalies in chest X-ray images with this comprehensive training.

## KEYWORDS:

Artificial Intelligence, Diagnostic Model, Lung's abnormality.

# USE OF ANTI-APOPTOTIC IN THE TREATMENT OF SPINAL CORD INJURY

**Maham Sardar**, Sana Haider  
CECOS University of IT & Emerging Sciences

## INTRODUCTION:

Spinal cord injury (SCI) poses a considerable challenge in the realm of neurological disorders, often resulting in paralysis due to damage to the central nervous system (CNS) conductivity. The impediment presented by the blood-spinal cord barrier (BSCB) complicates therapeutic interventions, necessitating innovative approaches to enhance drug delivery into the spinal cord.

## OBJECTIVE(S):

1. To investigate the potential of anti-apoptotic agents, specifically Z-VAD-FMK, in the treatment of spinal cord injury.
2. To address existing challenges related to the efficacy, target specificity, and adverse effects of Caspase enzyme inhibitors, providing insights that could facilitate their translation into clinical trials.

## METHODOLOGY:

The research employs previous studies involving in vitro and in vivo experiments to assess the efficacy of Z-VAD-FMK in mitigating apoptosis and inflammation associated with spinal cord injury. Liposome scaffold composite systems are utilized as drug delivery carriers, and their effectiveness in enhancing the delivery of Z-VAD-FMK into the spinal cord is thoroughly evaluated.

## RESULTS:

The impact of Z-VAD-FMK on apoptosis and inflammation in the context of SCI. Efficacy data, including the reduction in Caspase enzyme activity, modulation of apoptotic pathways, and attenuation of inflammatory markers, are discussed. Furthermore, the study explores the advantages of the liposome scaffold composite system in overcoming barriers to drug delivery.

## CONCLUSION:

The study provides valuable insights into the potential use of anti-apoptotic agents, particularly Z-VAD-FMK, in the treatment of SCI. The integration of liposome scaffold composite systems further enhances the feasibility of drug delivery, offering a multifaceted approach to addressing the complexities of SCI treatment.

## KEYWORDS:

Spinal Cord Injury, Central Nervous System (CNS) Conductivity, Anti-Apoptosis.

# **DIFFERENTIAL ANALYSIS OF HISTOPATHOLOGICAL SLIDES VS. STANDARD GLASS SLIDES IN THE DETECTION OF COMMON MICROSCOPIC FEATURES SEEN IN HEPATOCELLULAR CARCINOMA AND KIDNEY ADENOCARCINOMA**

**Khalid Mehmood, Muhammad Ismail, Saad Salman, Syed Jawad Shah, Muhammad Rehan, Sana Haider**  
CECOS University

## **INTRODUCTION:**

Histopathology provides microscopic examination of abnormal tissues associated with disease, which is necessary for diagnosis. The purpose of this study is to increase diagnostic accuracy by comparing the histopathological features of HCC and renal adenocarcinoma with controls.

## **OBJECTIVE(S):**

1. To create a digital library for two types of cancer: Hepatocellular Carcinoma (HCC) and Renal Adenocarcinoma (KAC).
2. To investigate the histopathological features of these tumors and their relationship to prognosis using digital pathology tools.

## **METHODOLOGY:**

This study involved interpreting two types of cancer i.e., liver carcinoma and kidney adenocarcinoma. The BMS Pharmacy Laboratory is equipped with a digital pathology platform that can record cellular data and abnormalities for microscopic analysis. Parameters such as polygonal cells, nuclear features, mitotic activity, vascularity, specific nuclear pleomorphism, and proliferation of endothelial cells were evaluated for HCC. Parameters such as glandular arrangement, nuclear atypia, and stromal appearance were investigated to define the glandular structure and stromal features in KAC.

## **RESULTS:**

A combination of genetic, epigenetic, and environmental factors contributes to the development of both types of cancer. Using the data, differences in mitotic activity and tissue architecture were identified; this indicates abnormal growth patterns and transformation patterns associated with HCC and KAC.

## **CONCLUSION:**

Specific histopathological features distinguishing HCC from KAC were determined comparatively. It helps clarify these differences and highlights the importance of histopathological examination in determining the best treatment for said cancer types.

## **KEYWORDS:**

Histopathology, Hepatocellular Carcinoma, Renal Adenocarcinoma.

# THE ASSOCIATION OF SERUM FERRITIN LEVEL AND COVID-19 SEVERITY IN COVID-19 PATIENTS OF PESHAWAR

Hamza Ali, Abbas Amin, Soma Irshad, Fida Muhammad, Fatima Himayat, Sidra Shams  
Bannu Medical College

## INTRODUCTION:

COVID-19 infection has played havoc by rapidly spreading across continents. The virus infects by attaching to the angiotensin-converting enzyme 2 (ACEII) receptor. Ferritin is an acute phase reactant and intracellular iron storage protein. It is raised in inflammatory conditions and observed that elevated ferritin levels have a poor prognosis in hospitalized patients. Studies have correlated elevated ferritin levels and other pro-inflammatory markers in COVID-19 to disease severity, poor outcomes, and mortality. The utility of ferritin level as a marker to predict disease severity has been reported but not fully understood. The study assesses COVID-19 outcomes using Ferritin for severity prediction.

## OBJECTIVE(S):

1. To evaluate the outcomes of COVID-19 patients with Ferritin as a predictor of severity.

## METHODOLOGY:

It was a cross-sectional study performed in the Department of Medicine at Khyber Teaching Hospital Peshawar from April 2021 to June 2021. A total of 90 patients were included in the study. Patients were divided into two groups; the FM group included the Ferritin levels of the patients with Mild to Moderate Illness. FS group included the Ferritin levels of the patients with severe illness All information was recorded using preforms and analyzed on IBM SPSS for MacBook, Version 26.0.

## RESULTS:

Linear regression analysis showed that ferritin level was a significant predictor of disease severity (Adjusted R Square = .880). Ferritin was  $105.70 \pm 43.19$  (ng/ml) for the FM group and  $725 \pm 125.19$  (ng/ml) for the FS group.

## CONCLUSION:

Ferritin levels might predict the disease severity effectively if done early on.

## KEYWORDS:

Ferritin, Hospitalized Patients, Biomarkers.

# **THE MANAGEMENT OF UROLITHIASIS IN CHILDREN WITH RENAL FAILURE, A MULTICENTRIC STUDY.**

**Wajiha Ali**, Zahoor Ahmad khan, Zalan khan, Hooria Asghar  
Northwest School of Medicine, Peshawar

## **INTRODUCTION:**

Urolithiasis in paediatric patients presenting with renal failure represents a complex and challenging intersection in clinical practice. As the incidence of urolithiasis continues to rise, a comprehensive understanding of the underlying complexities is paramount

## **OBJECTIVE(S):**

1. To determine the efficacy and safety of surgical management of paediatric renal stones associated with renal failure at the Institute of Kidney Disease HMC Peshawar.

## **METHODOLOGY:**

A descriptive study was conducted from March to December 2022 on 480 children under 13y with urolithiasis and renal failure at IKD HMC Peshawar, utilizing a non-probability consecutive sampling technique, collecting preoperative, per-operative, and post-operative data on structured proformas, which were then analyzed using SPSS v26.

## **RESULTS:**

The mean stone size was 18 mm  $\pm$  7. The right side was involved 264 patients (55%). 1.4% had unilateral non-functioning kidneys, and 0.8% had pyonephrosis and perinephric abscess. Management was divided into initial relief of obstruction by percutaneous nephrostomy and Dj stents followed by definitive management as, PCNL in 288, Open stone surgery in 56 Ureteroscopy in 69, and ESWL in 67 patients. Treatment results showed that 72% of patients either recovered their renal functions or became dialysis-free at the end of the follow-up period. Overall complete stone clearance after 6 weeks postoperatively was achieved in 460 patients' treatment.

## **CONCLUSION:**

Renal calculi complications in children persist despite modern treatment. Decompression can treat initial stones, but prevention can be achieved through public education, physician training, and modern clinics in rural areas.

## **KEYWORDS:**

Urolithiasis, PCNL, ESWL.

# PERIODONTITIS AND CARDIOVASCULAR DISEASE AS A SHARED CLINICAL CHALLENGE IN PATIENT CARE

Umair Ul Haq, Muhammad Anas Khan, Muneeb Ur Rahman, Abubakar Afzal, Saad Aziz, Arsalan Khan  
Bannu Medical College, Bannu

## INTRODUCTION:

Cardiovascular disease (CVD) remains the leading cause of death, accounting for approximately one-third of all deaths worldwide. Periodontitis is a constant incendiary sickness influencing the supporting designs of teeth, while cardiovascular infections include a scope of conditions influencing the heart and veins.

## OBJECTIVE(S):

1. To find the link between periodontitis and cardiovascular disease as a shared clinical challenge in patient care.

## METHODOLOGY:

This retrospective observational cohort study was conducted in Jinnah Medical and Dental College Karachi from May 2023 to August 2023. The study included a total of 230 patients. Patient data were collected through a comprehensive dental and medical records review. Detailed clinical and radiographic assessments were conducted to assess the severity of Periodontitis. Simultaneously, medical records were scrutinized to identify patients with documented cardiovascular diseases. Data was analyzed using SPSS v29.0. Descriptive statistics were used to summarize patient demographics and disease prevalence. A p-value of  $<0.05$  was considered statistically significant.

## RESULTS:

The study included 230 patients with a mean age of 45. 55% of the participants were male, and 45% were female. Based on clinical measurements, 35% of patients showed mild periodontitis, 45% moderate periodontitis, and 20% severe periodontitis. Radiographic evidence of bone loss was observed in 60% of the patients. 40% of the patients had a documented history of cardiovascular diseases, including coronary artery disease, myocardial infarction, stroke, or hypertension.

## CONCLUSION:

A significant association between periodontitis and cardiovascular diseases has been found. While the precise mechanisms remain fully understood, these findings underscore the importance of comprehensive healthcare that considers both oral and cardiovascular health.

## KEYWORDS:

Cardiovascular disease, periodontitis, radiographic, oral, hypertension.



# **EFFICACY OF DINUTUXIMAB FOR THE TREATMENT OF HIGH-RISK NEUROBLASTOMA: A SYSTEMATIC REVIEW AND META-ANALYSIS**

**Muhammad Ahmad**, Maaz bin Zahid, Malik Waleed Zeb Khan  
Khyber Medical College, Peshawar

## **INTRODUCTION:**

High-risk neuroblastoma (HR-NB) has a poor prognosis despite several treatment strategies. Dinutuximab, an anti-GD2 monoclonal antibody has been recently added to the standard of care, however, its effect on long-term mortality is uncertain.

## **OBJECTIVE(S):**

1. To assess the efficacy of dinutuximab for treating HR-NB compared to other therapies.

## **METHODOLOGY:**

Pubmed and Cochrane Library were interrogated for articles investigating the effect of dinutuximab on the outcomes of patients with HR-NB. The resulting articles were screened based on our eligibility criteria by two reviewers independently and the selected articles were subjected to a full-length review for final selection. Any disagreements were addressed through consultation with other authors. Risk of bias assessments were conducted using the Cochrane Risk of Bias Tool for randomized-controlled trials and the Newcastle-Ottawa scale for observational studies. A random-effects model was used to determine the risk ratios (RR) for the adverse endpoints. The main outcomes were all-cause mortality and 5-year event-free survival (5-year-EFS).

## **RESULTS:**

Five studies comprising 1,462 participants were included in the analysis using RevMan software. Dinutuximab was associated with lower all-cause mortality as compared to the control (pooled RR, 0.45; 95% CI, 0.24-0.84,  $P=0.01$ ). 5year-EFS was also greater for patients treated with dinutuximab (pooled RR, 0.12; 95% CI, 0.10-0.15,  $P<0.001$ ). Furthermore, dinutuximab was linked with a greater incidence of complete remission (pooled RR, 9.55; 95%CI, 1.96-46.46,  $P=0.005$ ).

## **CONCLUSION:**

Dinutuximab is an effective therapy for HR-NB as it reduces mortality and increases the incidence of complete remission.

## **KEYWORDS:**

Dinutuximab, Neuroblastoma, Monoclonal Antibody.

# **EFFICACY AND SAFETY OF TAFAMIDIS FOR THE TREATMENT OF TRANSTHYRETIN AMYLOID CARDIOMYOPATHY; A SYSTEMATIC REVIEW AND META-ANALYSIS**

**Muhammad Ahmad**, Malik Waleed Zeb, Junaid Imran, Malik Sheheryar, Mazhar Khalil, Zohaib Rehman,  
Aizaz Ali  
Khyber Medical College, Peshawar

## **INTRODUCTION:**

Transthyretin amyloid cardiomyopathy (ATTR-CM) is caused by the deposition of transthyretin amyloid fibrils in the myocardium. Tafamidis binds to transthyretin, thereby preventing tetramer dissociation. According to the available literature, tafamidis is associated with better cardiovascular outcomes in patients with ATTR-CM.

## **OBJECTIVE(S):**

1. To systematically assess the outcomes of patients with ATTR-CM treated with tafamidis and compare them with those on other treatments.

## **METHODOLOGY:**

PubMed and Cochrane Library were interrogated for the identification of studies that assessed the effect of tafamidis on the prognosis of ATTR-CM. We imported the resulting articles from our search to Rayyan software and screened them according to our eligibility criteria. Articles were also added manually by identifying relevant articles in the reference sections of selected studies. Risk of bias assessment of the selected studies was conducted using the Newcastle-Ottawa scale. Any disagreements were resolved by a discussion with other authors. The analysis was conducted on RevMan software, a random effects model was used to determine the risk ratio (RR) for the adverse endpoints.

## **RESULTS:**

Thirteen studies comprising 2,574 participants with 87.6% of them being males were included for the analysis. ATTR-CM patients on tafamidis had a decreased risk for all-cause mortality or heart transplantation as compared to those on another treatments/placebo (pooled RR, 0.52; 95% CI, 0.36-0.76,  $P<0.01$ ). More patients receiving tafamidis treatment were alive at 2 years as compared to those on placebo (pooled RR, 1.22; 95% CI, 1.06-1.41,  $P<0.01$ ).

## **CONCLUSION:**

The main outcomes included all-cause mortality and two-year survival.

## **KEYWORDS:**

Tafamidis, Transthyretin Amyloid Cardiomyopathy, Treatment.

# **EXPLORING THE DEMOGRAPHIC AND RISK PROFILE OF OCULAR DISEASES IN A TERTIARY HEALTHCARE SETTING IN PAKISTAN: A GENDER AND AGE-BASED ANALYSIS**

**Jamal Shah**, Huma Gul  
Northwest School of Medicine

## **INTRODUCTION:**

Early diagnosis is necessary for most eye diseases to prevent blindness. Healthcare services should be tailored based on ophthalmic disease in that region.

## **OBJECTIVE(S):**

1. To investigate the prevalence of ophthalmic diseases among patients seeking treatment at a tertiary care hospital in Peshawar.

## **METHODOLOGY:**

This hospital-based cross-sectional study examined all patients who visited the outpatient department of ophthalmology between August and November 2022. Each participant provided voluntary verbal informed consent before being examined by an ophthalmologist and optometrist.

## **RESULTS:**

Two thousand ophthalmic patients (n=2000) (100%), whose ages ranged from 5 to >65 years, with a mean age of 50.44 ±17.08 years, were studied; 940 (47%) males and 1060 (53%) females. The distribution of ocular diseases identified via ophthalmological examinations showed that the most prevalent ocular morbidity was cataract 450 (22.5%), followed by refractive errors 430 (21.5%). Bacterial conjunctivitis 220 (11%), Glaucoma 120 (6%), and eyelid diseases 110 (5.5%). Reported significant risk factors for diagnosed eye disorders among study participants included aging, vitamin A deficient diet, infections, past ocular disease, family history of eye diseases, poor hygiene, seasonal allergies, trauma, diabetes, and hypertension.

## **CONCLUSION:**

The prevalence of ocular diseases was higher in women than in men. The most prevalent ocular morbidity was cataracts.

## **KEYWORDS:**

Ocular Diseases, Cataract, Outpatient Department, Tertiary Care Hospital, Pakistan.

# **THE VARIATION IN THE ERUPTION TIMINGS OF PERMANENT THIRD MOLARS IN PATIENTS VISITING THE OUT-PATIENT DEPARTMENT OF PESHAWAR DENTAL COLLEGE AND HOSPITAL**

**Sania Zaeem, Sobia Khalil**  
Peshawar Dental College, Peshawar

## **INTRODUCTION:**

The variation in eruption timings of permanent third molars poses several challenges for dental professionals and individuals undergoing dental treatment.

## **OBJECTIVE(S):**

1. To determine the frequency of variation in the eruption timings of permanent third molars in patients visiting the OPD of Peshawar Dental College and Hospital.
2. To report any gender predilection in the eruption timings of permanent third molars.

## **METHODOLOGY:**

A cross-sectional study was conducted in the Department of Oral Biology, Peshawar Dental College and Hospital from September 2023 to October 2023 on 106 patients through non-probability convenience type sampling. The data was collected through patient proforma (Annexure 1). Data was analyzed using SPSS (version 24). Descriptive statistics were employed for the eruption dates of the third molars. The mean values for the groups were compared using unpaired t-tests.

## **RESULTS:**

The eruption timing of permanent third molars amongst 106 patients (46 males and 60 females) visiting the OPD of Peshawar Dental College was assessed. The earliest age at which the permanent third molars erupted for males and females was 13 and 11 years, respectively. The majority of third molars were erupted between the ages of 17 to 25 years. The mean age of eruption for both genders was 20 years + 3 (SD). Gender was significantly associated with the third molar eruption age ( $p < 0.05$ ).

## **CONCLUSION:**

The permanent maxillary and mandibular third molars were found to erupt between the ages of 17 to 25 years. Gender was significantly associated with the eruption timing of permanent third molars.

## **KEYWORDS:**

Permanent Third Molars, Eruption Timing, Wisdom Tooth.

# PHYSICIAN PERCEPTION REGARDING PRECISION MEDICINE: A MULTI-CENTER KAP SURVEY OF REPRESENTATIVE CLINICIANS IN PESHAWAR

Warda Tariq, Savera Anum, and Hareem Ikram.  
Rahman Medical College, Peshawar

## INTRODUCTION:

Conventional therapies for diseases are increasingly ineffective, ushering in the era of precision medicine. Precision medicine utilizes an individual's genetic makeup for early disease detection and tailoring personalized treatments. To integrate precision medicine into clinical practice, the initial step is to raise awareness.

## OBJECTIVE(S):

1. To assess the knowledge, attitude, and practice of doctors towards precision medicine, comparing these aspects among different representative clinicians (cardiologists, oncologists, gastroenterologists, nephrologists, endocrinologists, pathologists, pulmonologists) in tertiary care hospitals of Peshawar.

## METHODOLOGY:

A descriptive comparative cross-sectional study conducted from June to October 2023 included 100 clinicians from Rehman Medical Institute, Hayatabad Medical Complex, and Khyber Teaching Hospital in Peshawar. Clinicians were grouped by specialty and hospital affiliation. A self-administered questionnaire determined perception levels with a cutoff of 70%. Statistical analysis used SPSS 28, with a p-value  $\leq 0.05$  considered significant.

## RESULTS:

The response rate was 93 clinicians. Below the 70% cutoff, 90.3% scored in knowledge, 58.1% in attitude, and 93.5% in practice. Overall, 92.5% scored below the cutoff (90.3% in knowledge, 58.1% in attitude, and 93.5% in practice). No significant differences were found in overall KAP scores among hospitals, departments, and designations.

## CONCLUSION:

The study revealed insufficient awareness of precision medicine. Interestingly, no perception differences were found in specialties where precision medicine is urgently needed.

## KEYWORDS:

Precision Medicine, Preventive Medicine, Personalized Treatment.

# KNOWLEDGE REGARDING ENVIRONMENTAL SUSTAINABILITY AMONG DENTAL PROFESSIONALS

**Sarah Khan,** Mashaim Imran, Durkhane Ahad, Nayaab Haleem  
Peshawar Dental College, Peshawar

## INTRODUCTION:

Sustainability refers to carrying out dental practices that cause little damage to the environment. Dental practices would be carried out correctly if dental practitioners knew the potential hazards associated with the careless disposal of dental materials.

## OBJECTIVE(S):

1. To evaluate the level of awareness about environmental sustainability among dental professionals.

## METHODOLOGY:

A cross-sectional study was carried out among 125 dental professionals through 125 questionnaire forms containing ten questions concerning the environmental sustainability of dental materials.

## RESULTS:

The majority were females (72%) and many had a professional activity of 1-5 years. There was 52% aware of the concept of environmental sustainability and 28.8% considered the use of digital equipment, technology, and workflows to be the major aspect that represents sustainability and 68.8% showed concern about the implementation of sustainable dentistry in their workplace, while 5.2% of them considered a reduction of paper usage as the most effective approach for implementing sustainability in dental practice. A prime factor related to dental activity that negatively impacted the environment was found to be improper biohazardous waste disposal (33.6%). Implementation of practices related to reusing and recycling (32%) was found to be the major action they intend to take to implement sustainability in their dental practice.

## CONCLUSION:

The majority of participants showed concern for implementing sustainable dentistry in their workplace. The focus on reducing paper usage was common. Addressing improper biohazardous waste disposal is crucial. Participants expressed intentions to adopt practices related to reusing, and recycling. The impact of the COVID-19 pandemic on sustainability in the dental field was noted.

## KEYWORDS:

Sustainability, Approaches, Awareness.

# **COMPARATIVE ANALYSIS OF SLR WITH MRI IN DETECTION OF SCIATICA AND IT'S SEVERITY IN PESHAWAR**

**Syed Muhammad Sikander Zafar**, Raffay Amin, Behram Azam Chishti, Khawaja M. Shaheer, Abdullah Atif,  
Moez Abdullah.  
Peshawar Medical College, Peshawar

## **INTRODUCTION:**

Sciatica is defined as pain radiating from the lower spinal region to the lower extremities. It is commonly caused by lumbosacral nerve root compression. In the Straight Leg Raising test, the patient is asked to lie straight in the supine position, while the examiner lifts the patient's legs alternatively while keeping the knee extended. The level at which the patient complains of radiating pain to the leg is noted.

## **OBJECTIVE(S):**

1. To assess the accuracy and reliability of SLR compared to MRI in detecting the severity of sciatic nerve compression.

## **METHODOLOGY:**

A 4 yearlong comparative cross-sectional review was conducted retrospectively from 1st February 2018 to 21st January 2022 in a private clinic of district Peshawar. The sample size was 309 and only patients with sciatica-related pain were included in the criteria. Descriptive statistics were applied to determine the frequency and percentage of study variables such as MRI and SLR results based on individual patient assessment. T-test was applied to compare the significance of MRI and SLR results, keeping the P-value <0.05, at a 95% confidence level). Analysis of the data was achieved via SPSS 26.

## **RESULTS:**

Out of 309 patients 234 were females (75.7%), and 75 males (24.3%). SLR diagnosed 48 as a true negative for sciatica, 17 as a false positive for sciatica, 77 as a false negative and 167 as a true positive. The chi-square test was applied with a Pearson chi-square value of 38.105 with a significant P-value of 0.000.

## **CONCLUSION:**

The study concluded a significant association between MRI and SLR in the detection of the severity of sciatic nerve compression.

## **KEYWORDS:**

Sciatica, Straight Leg Raising test, Lasegue Test.

# **BETA-THALASSEMIA PREVENTION STATUS: HOW TO END THE DISEASE TOGETHER- A BREAKTHROUGH EXPLANATORY SEQUENTIAL MIXED METHOD STUDY IN PESHAWAR, KPK**

**Nayab Qayyum**, Syeda Wajiha Zahra  
Khyber Girls Medical College, Peshawar

## **INTRODUCTION:**

Beta-thalassemia is an inherited Hemoglobinopathy that causes defective synthesis of the beta chain of hemoglobin. Prevalence of beta-thalassemia is very high in Pakistan having approximately 5 to 10 million carriers with a carrier rate of 5 to 7%.

## **OBJECTIVE(S):**

1. To evaluate the availability of preventive facilities and their implementation status.
2. To identify the potential barriers hindering the prevention of the disease.

## **METHODOLOGY:**

This study followed explanatory sequential mixed methodology and was conducted in the setting of 13 hospitals/facilities of Peshawar from 4th Feb 2023 till 30th Sep 2023. Non-probability purposive sampling was used. The quantitative data was collected through a self-constructed questionnaire and analyzed using SPSS 20 while qualitative data was collected through semi-structured interviews and was analyzed using Grounded Theory using inductive coding, axial coding, and selective coding followed by thematic analysis.

## **RESULTS:**

Data indicated that the availability of diagnostics for screening and early diagnosis was poor with only 45.5% providing preventive diagnostics. The implementation of available facilities was also questionable as no documented record was available. The major barrier turned out to be a lack of policy from the government.

## **CONCLUSION:**

The study concludes that the major setback due to which we have failed in preventing the disease unlike Saudi Arabia or Kuwait is due to lack of policy and funding from the government.

## **KEYWORDS:**

Prevalence, Prevention, Implementation, Beta-thalassemia.



# PERCEPTION OF DIETARY INFLUENCE ON UROLITHIASIS: A CASE-CONTROL STUDY IN TERTIARY CARE HOSPITALS OF PESHAWAR

Azmeer Aamir, Muhammad Hamza Khan, Muhammad Basit Malik, Ali Murtaza, Syed Zulqarnain, Ahmed Khan Khalil

Peshawar Medical College

## INTRODUCTION:

Urolithiasis is a common disorder worldwide with an increasing prevalence and high recurrence rate. This makes preventive measures like dietary modification an essential part of patient care.

## OBJECTIVE:

1. To compare the perception of dietary influences in urolithiasis formation between normal and urolithiasis patients.

## METHODOLOGY:

A case control study with a sample size of 250, including 125 cases and 125 controls was conducted from 1<sup>st</sup> September to 31<sup>st</sup> October, 2023. A structured questionnaire was administered to collect data from patients. For nine food items and 14 beverages, respondents chose one of four options concerning their relationship with stone formation, i.e. "favorable", "unfavorable", "neutral", and "no idea". SPSS was used to analyze the data.  $P < 0.05$  was considered significant.

## RESULTS:

The age of participants ranged from 18-80 years with a mean age of  $36 \pm 12.4$  years including 179 (71.6%) males and 71 (28.4%) females. Most of them were residents of Peshawar (199, 79.6%) with intermediate-level education (44, 17.6%). In the case group (75.2%) participants had a family history of urolithiasis. The majority in the case group were managed medically (113, 90.4%) and had received dietary counseling (79, 63.2%). Red meat, potatoes, and grapes were the only three items out of 23 that were found non-significant ( $p > 0.05$ ) with regards to their effect on urolithiasis. Overall the response rate from the participants was 100%. The 'Case group' identified 36.8% of items causing stones correctly while the 'control group' identified 12.0% of the items correctly.

## CONCLUSION:

We observed that Urolithiasis patients (cases) were more aware of the diet that contributes to the formation of renal stones as compared to the general population (control group).

## KEYWORDS:

Urolithiasis, Case, Control, Dietary Influence.

# **FREQUENCY OF DIFFERENT MOLECULAR SUBTYPES OF CARCINOMA BREAST AT A TERTIARY CARE CANCER CENTER**

**Muhammad Ali**, Huzaifa Ahmad, Shehryar Khan, Ahmad Khan Khalil, M Daniyal Zaman, M Naveed Khan  
Peshawar Medical College

## **INTRODUCTION:**

Breast cancer is the 5<sup>th</sup> leading cause of death worldwide. It accounts for 55.7% of all malignancies among adult females in Pakistan. We need a continuous watch on its rising incidence in our population to be able to take preventive actions nationally.

## **OBJECTIVES:**

1. To determine the frequency of different molecular subtypes of carcinoma breast, (at tertiary care cancer center).
2. To determine the association among tumor stage and lymph node metastasis with molecular subtypes.

## **METHODOLOGY:**

It was a cross-sectional study done at the Institute of Radiotherapy and Nuclear Medicine (IRNUM) during a period of 2 months. 2 years of data were retrospectively retrieved from the documented records of the patients. A consecutive serial sampling technique was used and analysed by SPSS.

## **RESULTS:**

Among 200 cases basal-like was the most common molecular subtype (n=75/200, 37.7%), followed by luminal A (n=56/200, 28.1%), Luminal B (n=40/200, 20.1%) and Her2 positive (n=28/200, 14.1%) respectively. Intermediate grade II (n=121/200, 60.8%) was more commonly reported. Stage II was more commonly reported with a percentage of 40.5% followed by Stage III 27.8%, Stage IV 20.6%, and Stage I 11.1% respectively. The association of molecular subtypes with Lymph Node metastasis status was statistically significant while the association of Molecular subtypes with Stages was statistically insignificant.

## **CONCLUSION:**

Basal-like molecular subtype was more common in our study population. These patients are the candidates for immune checkpoint inhibitors as they don't respond to tamoxifen and Herceptin. Almost 50% of our cases were higher stage (III and IV) at the time of diagnosis. The majority of the patients were young in our study population.

## **KEYWORDS:**

Estrogen Receptor, Progesterone Receptor, Breast Neoplasms

# THE PATTERN OF MANDIBULAR THIRD MOLAR IMPACTION: A RETROSPECTIVE STUDY OF RADIOGRAPHS IN A SUB-POPULATION OF PESHAWAR

Addan Iqbal, Rehab, Mahnoor, Aiman, Aqsa  
Peshawar Dental College

## INTRODUCTION:

Impacted third molars, commonly known as wisdom teeth, are a significant concern in dental practice

## OBJECTIVE(S):

1. To determine the frequency of impacted mandibular third molars in the sub-population of Peshawar using OPG radiographs during a period of two months.
2. To report any variation in the distribution of impacted mandibular third molars with regards to gender and position of tooth

## METHODOLOGY:

A Retrospective Cross-Sectional study was conducted at Peshawar Dental College Hospital. Orthopantomographs (OPGs) of the duration from January to December 2023 were obtained from the Department of Radiology, PDC, and a Probability Convenience Sampling Technique was followed for the selection of OPGs. The data was collected using a proforma, which gathered patient demographic details. This included both dentulous and edentulous adults, ranging in age from 17 to 60 years old. The chi-square test has indicated an association between the variables.

## RESULTS:

The permanent mandibular third molar impactions amongst 297 OPG records (155 males and 142 females) between the age of 17-60 years visiting the radiology department of Peshawar Dental College were assessed. The impactions were reported in 114 OPGs of 60 males (52%) and 54 females (47%) respectively. Gender and position of teeth were insignificantly associated with the third molar impactions as  $p > 0.05$ .

## CONCLUSION:

The frequency of mandibular third molar impaction was higher on the left side. The present study provides useful data regarding the radiographic status of impacted mandibular third molars in patients.

## KEYWORDS:

Third molar impaction, Orthopentomograph, Angulation

# **LAPAROSCOPIC CHOLECYSTECTOMY: A RETROSPECTIVE ANALYSIS OF PATIENTS IN DIFFERENT TEACHING HOSPITALS IN PESHAWAR**

**Sufian Meboob**, Faizan Ullah, Idress Khan, Ahmad Hassan, Muhammad Uzair, Said Misbah Ullah,  
Muhammad Hussain  
Peshawar Medical College

## **INTRODUCTION:**

The presence of stones in the gall bladder is referred to as cholelithiasis. Patients who have cholelithiasis are treated with surgical removal of the gallbladder with the help of a camera, known as laparoscopic cholecystectomy.

## **OBJECTIVES:**

1. To determine ultrasound findings of the patient before surgery.
2. To determine the stay of patients in the hospital following surgery.
3. To determine the frequency of laparoscopic cholecystectomy in laparoscopic cholecystectomy patients.

## **METHODS:**

It is a retrospective cross-sectional study that was conducted in the department of surgery in different teaching hospitals of Peshawar from June to August 2023. The data was collected on a self-structured proforma from already documented files of the patients. The sample size was 400 calculated through Rao-soft online calculator, and analyzed on SPSS version 26.

## **RESULTS:**

In this study of 400 patients, 319 came within the 31-60 age group, while 81 were aged 15-30. Among those patients, 288 were female and 112 were male. Gallstones were seen in 323 individuals, whereas 77 had some other pathologies. The hospital stay duration shows that 295 patients stayed for 3 days, while 105 individuals experienced a prolonged stay for more than 3 days, indicating the development of complications such as CBD injury, gall bladder perforation, and intraoperative wound infections.

## **CONCLUSION:**

The study concludes that most of them were female (aged 31-60). This shows that warrants urgent attention to reduce risk factors for cholelithiasis. Prolonged hospital stays indicate complications, emphasizing the need for immediate intervention.

## **KEYWORDS:**

Laparoscopic Cholecystectomy, Sonogram Findings, Hospital Stay



# **MEDICAL EDUCATION**



# **EXPLORING MOTIVATIONAL FACTORS INFLUENCING MEDICAL STUDENTS' ENGAGEMENT IN RESEARCH ACTIVITIES**

**Shah Fahad**, Muhammad Salman Khan, Muhammad Rehan, Faryal Maruk  
Northwest School of Medicine, Peshawar.

## **INTRODUCTION:**

This study examines factors influencing medical students' research engagement, evaluating the impact of mentorship and the research environment. Despite the benefits of research in medical education, students face barriers like time constraints, lack of mentors, and inadequate research training.

## **OBJECTIVE(S):**

1. To identify motivating factors and assess the impact of mentorship and the research environment on medical students' research activities.

## **METHODOLOGY:**

This six-month descriptive cross-sectional study included 368 medical students from NWSM, Jinnah Medical College, Rehman Medical College, and Pak International Medical College. Data obtained through a structured questionnaire utilizing non-probability convenience sampling, encompassed demographic details, Likert scale responses, and factors impacting research engagement.

## **RESULTS:**

The study's results highlight a demographic profile concentrated in the 21-23 age group, comprising 53% males, with 59% from NWSM College. Motivation scores ranged notably high, from 3.60 to 3.96. Moderate motivation was observed in factors like college mentorship, mentor and supervisor impact, and the research environment. However, no significant gender association with research participation was noted. Age, academic level, and college affiliation significantly influenced engagement. Factor analysis identified two key factors: Motivational Factors and Engagement in Research Activities, showing a positive correlation. Notably, motivational factors positively predicted engagement, and college affiliation emerged as a significant positive predictor.

## **CONCLUSION:**

Promote supportive research environments and mentorship for enhanced medical student engagement, fostering academic and professional development. The study emphasizes the crucial role of motivational factors, mentorship, and the research environment in fostering medical students' research involvement.

## **KEYWORDS:**

Medical Education, Research Engagement, Motivational Factors, Mentorship.



# ATTITUDE, PRACTICE, AND BARRIERS TOWARDS RESEARCH AMONG UNDERGRADUATE MEDICAL STUDENTS IN PESHAWAR

Aqsa Ejaz, Alina Alamgir, Aiman Khalid  
Northwest School of Medicine, Peshawar

## INTRODUCTION:

Health research is pivotal for disease prevention, diagnosis, and treatment, shaping healthcare policies. Early exposure to research not only imparts research skills but also cultivates problem-solving attitudes, influencing the trajectory of students' careers.

## OBJECTIVE(S):

1. To assess medical students' attitudes and practices towards research, while identifying barriers hindering medical research among undergraduate students.

## METHODOLOGY:

A cross-sectional descriptive study was conducted in three medical colleges (NWSM, RMC, and PIMC) from March to August 2023, employing a Non-Probability Convenient Sampling Technique. The study involved 295 medical undergraduate students, utilizing a self-administered, pretested, and structured questionnaire. Statistical significance was set at  $P \leq 0.05$ .

## RESULTS:

Analysis of data from 295 participants across three medical colleges revealed an overall positive attitude (57.1%) towards research. No significant associations were found between attitude and gender ( $P=0.417$ ), institution ( $P=0.485$ ), or year of study ( $P \text{ value} = 0.67$ ). However, a substantial difference in research participation was noted based on the year of study ( $P \text{ value} = 0.0001$ ), with final-year students (55.8%) demonstrating higher involvement than first-year students (14.8%). Barriers identified included time constraints and insufficient research knowledge.

## CONCLUSION:

While medical students exhibit a generally positive attitude towards research, participation levels vary by the year of study. The study highlights the need for fostering a research culture and addressing barriers, such as time constraints and the demand for increased mentors ship, to enhance students' engagement in medical research activities

## KEYWORDS:

Medical Undergraduates, Attitudes, Barriers, Research, Participation.

## EXPERIENCES OF PROMETRIC ENDEAVOR NURSES IN PAKISTAN

**Fazal Rahim**, Fath Ur Rahman, Basit Ali, Naseem Farhana, Shahana Gulab, Anwar Ullah, Muhammad Kashif, Sonia Patris, Shabana Isaac  
Rufaidah Nursing College, Peshawar

### INTRODUCTION:

The study examined the unique perspective of Pakistani nurses who have taken the Prometric certification journey. Prometric exams (DHA, HAAD, MOH, SNLE, NCLEX, OET) are the most authentic and reliable licensing exams for health professionals, especially in Gulf countries, the UK, the USA, Canada, Europe, and Australia.

### OBJECTIVE(S):

1. This research aims to explore the challenges faced by Prometric endeavor nurses in Pakistan.

### METHODOLOGY:

Qualitative descriptive research was conducted from May 2023 to October 2023, using semi-structured interviews, and purposive sampling techniques with data saturated on sample size, 13. A modified thematic analysis of Braun and Clark's six steps (2006) by Sage (2022) was done. Two qualitative research experts, one field expert, and two linguistics for content validity index (CVI =0.87) were employed to generate codes, subthemes, and themes. Pilot coding (preliminary coding exercise to assess feasibility) and percentage agreements were carried out to ensure consistency among qualitative data coding.

### RESULTS:

In this study, out of 13 Prometric participants, 10 males (76.92%) and 3 females (23.07%) were interviewed. Five major themes i.e. challenges faced, strategies followed, insights into prometric exams, suggestions, and inspiration figures were found. The study recommended further research on prometric significance for all health professionals, a mixed-method approach, and government initiatives for prometric aspirants.

### CONCLUSION:

This study underscores the complex, revolutionary efforts and multi-faced perspective of prometric endeavor nurses in Pakistan and the challenges that might be encountered by following the recommended strategies and suggestions.

### KEYWORDS:

Qualitative research, Health Education, Licensure, Certification.

# **ACADEMIC MOTIVATION AMONG MEDICAL STUDENTS OF PESHAWAR: A CROSS-SECTIONAL STUDY**

**Muhammad Muneeb Khan**, Shandana Gul, Maimoona Naeem, Mashal Shahid, Aiman Haroon, and Iman Aly  
Ayub Medical College, Abbottabad

## **INTRODUCTION:**

Motivation is a key focus in medical research, representing one's commitment to action. Higher student motivation correlates with improved learning quality. Self-determination theory categorizes motivation into intrinsic and extrinsic types, each associated with distinct outcomes.

## **OBJECTIVE(S):**

1. To assess the motivation level of medical students.
2. To compare motivation levels among five years of study.
3. To determine gender differences in motivation levels.

## **METHODOLOGY:**

This study surveyed 390 undergraduate medical students from six colleges in Peshawar, using non-probability convenience sampling. Data was collected from June 23 to July 7, 2022, through a Google Forms questionnaire including demographic details and the 28-item Academic Motivation Scale (AMS). SPSS Version 20 analyzed mean motivation scores across genders and medical years, measuring both intrinsic and extrinsic motivation components.

## **RESULTS:**

In Peshawar, 82% of 390 medical students were motivated, with 42.7% extrinsically and 39.4% intrinsically motivated. Females and students in the second and fourth years showed higher motivation. The study, exceeding its intended size, emphasizes the need for tailored interventions to address diverse motivational dynamics among medical students.

## **CONCLUSION:**

Our research concludes that it was seen that females were more motivated than males and the most motivated year groups of the study were both 2nd year and 4th year with the final year showing the least motivation. Further research should be conducted in this area of study.

## **KEYWORDS:**

Motivation, Academic Motivation, Medical Students, Undergraduate, Intrinsic Motivation, Extrinsic Motivation.

# **MEDICAL STUDENTS' CAREER PREFERENCES AND ATTITUDE TOWARDS PSYCHIATRY: A CROSS-SECTIONAL STUDY ON INFLUENCES AND EDUCATIONAL IMPACT IN PESHAWAR**

**Zee Shan Khan**, Zahoor Ahmad Khan, Sulaiman Hussain, Hashir ul Jiyad, Salman Murad  
North West School of Medicine, Peshawar

## **INTRODUCTION:**

Mental health in Pakistan is neglected despite a considerable population experiencing psychiatric illnesses, with a shortage of professionals, particularly psychiatrists, resulting in a significant treatment gap.

## **OBJECTIVE(S):**

1. To explore medical students' career choices, their attitudes towards psychiatry as a career path, the factors influencing their career choices, and the impact of medical education.

## **METHODOLOGY:**

A cross-sectional study was conducted from January 2023 to August 2023 on 415 medical students from various medical colleges in Peshawar. The sample size was calculated using the WHO sample size calculator. A self-reported questionnaire was used and data was analyzed using SPSS 26.

## **RESULTS:**

The majority of participants (89.2%) considered psychiatry a noble medical specialty and equally important (89.9%). However, only 15.2% expressed an intention to pursue a career in psychiatry. Motivations for psychiatry included helping patients with mental illness (28.1%), personal experiences (23.7%), and medical education exposure (21.9%) but lack of interest and less financially rewarding field (15.9%) prevented considering it. Apart from psychiatry cardiology emerged as the top choice, followed by neurology and surgery. 57.8% of participants had formal psychiatry education, while only 29.6% participated in psychiatry-related activities, with 84.5% expressing positive impacts.

## **CONCLUSION:**

Medical students acknowledge the significance of psychiatry, but a relatively low percentage express an intent to pursue it as a career. Exposure to psychiatry-related activities during medical education positively influences students' perceptions of this field.

## **KEYWORDS:**

Medical Students, Psychiatry, Career Path, Medical Education.

# **DETERMINANT FACTORS IN CHOOSING A CAREER, CAREER EXPLORATION, AWARENESS, AND COUNSELLING THROUGH THE EYES OF HIGH SCHOOL STUDENTS**

**Sulaiman Hussain**, Zahoor Ahmad Khan, Zee Shan Khan, Syed Aizaz Ali Shah  
Northwest School of Medicine, Peshawar

## **INTRODUCTION:**

High school students' career choices are complex, and influenced by various factors and available resources. Understanding these factors can help educators and policy-makers create effective interventions and support systems.

## **OBJECTIVE(S):**

1. To investigate the determinant factors of choosing a career, career exploration, awareness, and counselling from the perspective of a high school student.

## **METHODOLOGY:**

A cross-sectional study was conducted from February 2023 to September 2023 on 350 high-school students (calculated through the WHO sample size calculator) from various public and private schools in Peshawar. A self-reported questionnaire was used and data was analyzed using SPSS version 26.

## **RESULTS:**

A 92% of participants made career choices, with MBBS (41.1) being the most common followed by army and engineering. Factors influencing career decisions included parental influence, general interests, knowledge of careers, skills, abilities, and talents. However, 8% of participants did not make career choices due to perceived time waste, financial constraints, lack of guidance, and friends' plans. Only 9.7% attended college counselling seminars, (>90%) did not attend. Most students sought career guidance through online resources, and 80.9% received valuable advice from parents and relatives.

## **CONCLUSION:**

The study underscores the intricate interplay of factors influencing high school student's career choices, emphasizing the necessity for enhanced career counselling and online guidance resources.

## **KEYWORDS:**

Career Choices, Career Exploration, Career Counselling, High School Students, Online Guidance.

## **EXPLORING THE LEVEL OF ACADEMIC PROCRASTINATION AND COPING STRATEGIES USED BY MEDICAL STUDENTS OF WAH MEDICAL COLLEGE**

**Mahnoor Fatima**, Zoya Habib, Rimsha Jafar, Ayesha Nawaz, Summaiya Muzaffar, Koukab Ejaz, Abdullah Akram, Ali Raza, Hassaan Mehdi, Usama Choudhry, Shahzeb Mubashir, Muhammad Afrooz  
Wah Medical College, Wah Cantt

### **INTRODUCTION:**

Procrastination is the act of delaying or postponing tasks or decisions. Academic procrastination is common among medical students and can negatively affect academic performance, mental health, and overall well-being. Strategies to control procrastination include activities like visualizing task completion and breaking tasks down into smaller parts.

### **OBJECTIVE(S):**

1. To determine the level of procrastination among medical students and to determine the coping strategies used by them to overcome it.

### **METHODOLOGY:**

A Cross-Sectional study was conducted at Wah Medical College from Dec 2022 to July 2023. A sample of 327 was calculated by using WHO sample size calculator. By adopting a random sampling technique, students from first to final year MBBS were included in the study. Field-tested questionnaires that were constructed after an extensive literature search were given to the students after obtaining informed consent. They were taken back after 2 days. Data was entered and analysed in SPSS version 22.0. Frequency tables and charts were formed accordingly.

### **RESULTS:**

Our results showed that 52.3% of students had severe procrastination and 49% of participants were using coping strategies (among which the most commonly used strategy was to remove distractions) against procrastination while 51% were not using any coping strategy.

### **CONCLUSION:**

Our study concluded that the procrastination level among most medical students falls in the severe category and most students are not using any coping strategies. Specially focused workshops, counseling sessions and motivational lectures should be conducted to eradicate the habit of procrastination among the students.

### **KEYWORDS:**

Procrastination, Medical students, Coping strategies.

## **ASSESSMENT OF SHIFT WORK DISORDERS AMONG NURSES WORKING IN POF HOSPITAL**

**Muhammad Faisal**, Muhammad Hamas Arshad, Anmol Talat, Ezzah Sahar, Fatima Zarish, Haleema Qadeer Dar, Naila Aman, Namal Baloch, Samreen Zehra, Fahad Haider Shah, Imroz Abid, Muhammad Ali Tahir, Muhammad Uzair  
Wah Medical College, Wah Cantt

### **INTRODUCTION:**

Shift work disorder (SWD) is a primary sleep disorder characterized by excessive sleepiness and/or insomnia that is related to shift schedules. Nurses have a high prevalence of SWD yet little is known about SWD among nurses in Pakistan.

### **OBJECTIVE(S):**

1. To determine the frequency of SWD and the factors associated with it among nurses working in POF hospitals.

### **METHODOLOGY:**

A cross-sectional study was conducted at POF Hospital from December 2022 to June 2023 on nurses working non-standard shifts. Using convenient sampling, a sample size of 118 nurses was selected. A 19-item questionnaire was used to collect data on the shift work schedule of nurses, their physical health, mental well-being, sleep patterns, and fatigue endured while working the shifts. The data was analyzed using SPSS version 22.0.

### **RESULTS:**

Out of 107 nurses who responded, 74% nurses had SWD. The mean SWD score was 24.7 and the median was 25. Among surveyed nurses, 50 (47%) belonged to the age group 18-30, 31 (38%) belonged to the age group of 31 – 42, and 16 (15%) were in the above 42 age group. Among those 3 age groups of nurses, those who were greater than 40 had the highest association with shift work disorder. Gender, duration of night shifts, and frequency of night shifts had no association with the disorder.

### **CONCLUSION:**

Our study indicates a high prevalence of Shift work disorder among nurses emphasizing the fact that nurses employed in shifts are more prone to sleep disorders. These findings call for a change in the current status of the healthcare system with a focus on managing shift work in hospitals.

### **KEYWORDS:**

Nurses, Patient Safety, Shift Work Disorder.

# **DISTANT LEARNING IN THE ERA OF LEARNING MANAGEMENT SYSTEM**

**Bibi Maleeha, Liaqat Ali, Sayeda Alishba Batool, Alia Batool**  
Khyber Girls Medical College

## **INTRODUCTION:**

The learning management system is an emerging tool in distant learning. The rationale of the study is based on the research question of the effectiveness of LMS in the learning domain of undergraduate medical students.

## **OBJECTIVE(S):**

1. To determine the effectiveness of LMS in teaching, learning, and assessment of undergraduate medical students in the renal module.

## **METHODOLOGY:**

It is a descriptive study that was conducted in IKD/ KGMC Peshawar from Jan 2023 till December 2023. A total number of 188 undergraduate students of fourth and final year KGMC were enrolled in the study by nonprobability consecutive sampling. An asynchronous method of teaching was adopted in renal modules. Formative and summative assessments were carried out on LMS. All the data was recorded on structured proforma and was analyzed on SPSS.

## **RESULTS:**

54 lessons were taught as an asynchronous way of teaching that included a study guide, benchmark studies, PowerPoint presentations, H5P videos, and interactive lessons on LMS. Comparative analysis showed that the mean pre and post-course quiz results were statistically significantly different ( $p$ -value  $t=9.12 < 0.001$ ). Similarly, the results of the Assignment showed significant differences ( $t$ -test 2.19,  $< 0.001$  in favor of LMS. There was no significant difference in pre and post-test regarding the year of training ( $p > 0.05$ ).

## **CONCLUSION:**

The Learning management system in Urology is an effective tool for teaching, learning, and assessment among medical students of Khyber Girls' Medical College

## **KEYWORDS:**

Learning Management Systems, Urology, Medical Education, Distant Learning.



# **PERCEPTION OF THE RELEVANT STAKEHOLDERS REGARDING OSCE AS AN ASSESSMENT METHOD IN NURSING EXAMINATION**

**Rehan Ullah**, Zulfiqar Ali, Salman Nasib, Bareera Shahid, Farwa Shakeel, Maryam Bibi  
Rehman College of Nursing, Peshawar

## **INTRODUCTION:**

Proper evaluation of students' clinical and practical competencies is an essential component of the nursing curriculum. A relevant method of evaluating students' clinical competence is the OSCE which Harden initially proposed in 1975. An OSCE is a multi-system assessment that tests clinical skills, attitude, and cognitive capacities utilizing real or simulated patients. Utilizing OSCE is seen as essential for ensuring client safety, reducing risk, encouraging learners, and improving clinical competencies. Various studies suggest that OSCE is a valid tool for evaluating nursing student's clinical performance.

## **OBJECTIVE(S):**

1. To explore the perception of relevant stakeholders regarding OSCE as an assessment method in the Nursing Examination.

## **METHODOLOGY:**

A qualitative descriptive exploratory study design was used for this study. Data were collected from a total of ten stakeholders recruited through purposive sampling techniques. Individual in-depth interviews were conducted. Data was transcribed verbatim and analyzed through thematic analysis.

## **RESULTS:**

The data were classified into three main themes including perceptions about OSCE, resources for OSCE, and challenges regarding OSCE. Further subthemes were also developed.

## **CONCLUSION:**

The study showed a positive perception by relevant stakeholders towards OSCE. Effective, valid, and reliable assessment method. Proper resource availability, examiners' unbiased attitude, and pre-OSCE workshops can make it more effective. The implementation of OSCE as an assessment method is a positive step for students' future development.

## **KEYWORDS:**

OSCE, Stakeholders, Perceptions, Assessment Method.

# COMPARISON OF SLEEP HYGIENE INDEX IN VIRTUAL, TEXTBOOK, AND HYBRID LEARNERS AMONG UNDERGRADUATE STUDENTS

Hania Latif Sami, Syeda Fatemah Raza Zaidi, Mian Ahmed Haroon  
Shalamar Medical and Dental College, Lahore

## INTRODUCTION:

Screens emitting blue light suppress melatonin release and alter the Circadian rhythm, leading to an irregular sleep-wake cycle and poor sleep quality, which can be measured by sleep hygiene.

## OBJECTIVE(S):

1. To determine and compare the sleep hygiene index of virtual, textbook, and hybrid learners
2. To find the correlation of study screen time with sleep hygiene index

## METHODOLOGY:

An IRB-approved cross-sectional study was conducted at Shalamar Institute of Health Sciences with a sample size of 400 students after receiving consent. Participants were chosen through simple randomization from each year. Sleep Hygiene Questionnaire consisted of demographic questions, mode of study, study screen time, and validated Sleep Hygiene Index (SHI). SHI scores were calculated through the Likert scale. Scores <26 are healthy, 27-43 as normal, and >35 are considered as unhealthy sleep hygiene. SPSS 20 was used for data analysis.

## RESULTS:

This study concludes that 20.9% of students were textbook learners, 20.9% of students were virtual learners, and 58.1% of students were hybrid learners. From the whole dataset, 22.4% had unhealthy SHI scores, 23.3% had normal scores, and 54.4% had healthy scores. Data analysis by conducting a chi-square test for mode of learning and SHI score showed significant results with  $p < 0.05$ . There was a positive correlation between study screen time and SHI scores with a correlation coefficient = 0.36 ( $p = 0.01$ ). ANOVA test analysis showed significant differences in SHI scores in each mode of learners and significant differences in study screen times in different modes of learners.

## CONCLUSION:

The sleep hygiene index score is significantly higher for virtual learners showing that the use of electronic devices and higher study screen times contribute to poorer sleep hygiene practices.

## KEYWORDS:

Sleep Hygiene Index, Sleep Hygiene, Study Screen Time.

# EMOTIONAL INTELLIGENCE AND ITS INFLUENCE ON THE PERCEIVED STRESS AND ACADEMIC PERFORMANCE OF MBBS STUDENTS

Muhammad Daniyal Asjad, Hadiya Mian, Maha Moquit, Fizza Batool, Arham Sajid  
Shalamar Medical and Dental College, Lahore

## INTRODUCTION:

Emotional intelligence may be considered the set of skills one possesses that helps with the identification, regulation, and communication of their own emotions as well as with the identification, perception, and management of other people's emotions higher emotional intelligence has been linked with lower levels of perceived stress.

## OBJECTIVE(S):

1. To determine an association between the variables: emotional intelligence, academic performance, and perceived stress, in medical students.

## METHODOLOGY:

A cross-sectional study was conducted at Shalamar Medical and Dental College, Lahore from March 2023 to July 2023 on a sample of 280 second to fifth-year MBBS students, selected through systematic random sampling. A three-part questionnaire was used consisting of demographic information, Cohen's 10-item Perceived Stress Scale, and the Trait Emotional Intelligence Questionnaire-short form TEIQue-SF, which gives scores for Global (Overall) Emotional Intelligence and its 4 facets: emotionality, well-being, self-control, and sociability. Academic performance was assessed based on marks obtained in the previous annual professional exam. IBM SPSS Statistics 25.0 was used for data analysis.

## RESULTS:

A statistically significant inverse relationship was observed between Global Emotional Intelligence and Perceived Stress ( $p < 0.001$ ), with well-being having the greatest inverse relationship out of the four facets. The relationship between Global Emotional Intelligence and Academic Performance was not significant for non-clinical students, while it was statistically significant for students in their fourth and fifth years ( $p = 0.043$ ), with the self-control facet of EI showing the most significant relationship ( $p = 0.034$ ).

## CONCLUSION:

It is concluded that higher emotional intelligence may lead to a lower level of perceived stress as well as better academic performance in MBBS students during their clinical years.

## KEYWORDS:

Emotional Intelligence, Academic Performance, Stress.

# **UNDERSTANDING THE PERCEPTION OF MEDICAL STUDENTS AND PHYSICIANS REGARDING THE USE OF ARTIFICIAL INTELLIGENCE IN DISTRICT PESHAWAR**

**Areesh Malik**, Rimsha Rahim, Abeeha Syed  
Peshawar Medical College

## **INTRODUCTION:**

To offer advice on deployment we looked into the acceptance of clinical AI among health professionals and medical students around Peshawar. This study centers on the opinions of health professionals and medical students regarding the implementation and advancement of AI in medicine.

## **OBJECTIVE(S):**

1. To understand AI utilization in medicine from the perspective of medical students
2. To compare physicians' and students' perspectives on the impact of artificial intelligence in the practice of medicine.
3. To determine whether AI will prove to be helpful in the future for accurate diagnosis for physicians and guidance to the students.
4. To assess whether AI has the potential to replace healthcare professionals in the future.

## **METHODOLOGY:**

A descriptive cross-sectional study was conducted among medical students and physicians of Peshawar Medical College and affiliated hospitals from July 2023 to October 2023. A sample size of 300 participants was taken by a non-probability convenient sampling technique. Data was collected using a close-end questionnaire, and analyzed by SPSS 26.0.

## **RESULTS:**

Out of 300 participants, 64 were physicians and 236 were medical students. There was a 44.3% awareness rate of application of AI, although 72.3% lacked basic knowledge. 57.7% were positive about using AI in medicine, however, 34.1% discouraged it. 41.7% were of the view that physicians using AI will replace those who are not adopting AI.

## **CONCLUSION:**

The majority of respondents lack basic knowledge about clinical AI. Some agree physicians using AI will replace those who don't. Overall, the respondents have a positive view of AI in the field of medicine and are willing to adopt it.

## **KEYWORDS:**

Artificial Intelligence, Medical Students, Physicians.

# **ARTIFICIAL INTELLIGENCE IN DENTISTRY: A FRIEND OR FOE FOR PUBLIC AND DENTAL PERSONNEL**

**Marwa Habib-Ur- Rehman**, Syeda Malaika Mehtab Gillani, Syeda Haleema, Maria Noor  
Peshawar Dental College

## **INTRODUCTION:**

The ability of a machine to mimic intelligent human behavior is known as artificial intelligence, or A.I. There is no denying that this technology has significantly improved every aspect of frilled dentistry. Artificial intelligence in dentistry has undoubtedly enhanced diagnosis and treatment efficacy.

## **OBJECTIVE(S):**

1. To determine the knowledge, attitude, and perception of dental students, house officers, trainee medical officers, and faculty of Peshawar Dental College regarding the use of artificial intelligence (AI) in dentistry.

## **METHODOLOGY:**

An observational cross-sectional study was conducted in which the data was collected from students, house officers, trainee medical officers, and faculty of Peshawar Dental College, through the nonprobability quota sampling technique a total of 130 participants were given 26 close-ended questions using a validated questionnaire through google forms and hard copies. A descriptive statistical analysis was conducted using SPSS-26.

## **RESULTS:**

Out of 130 participants, 82 took part in the study. Among 82, 15(18.3 %) were male and 67 (81.7%) were female. 24.4% were dental students, 34.1% were dental school graduates and 41.5% were postgraduate dentists. 43% knew robotics and AI could differ from them. 53% had a positive attitude towards the intervention of AI in dentistry and 51% had a positive perception of the idea of the application of robotics and AI in their clinical practice.

## **CONCLUSION:**

Artificial intelligence has enormous potential to advance dental care. Even though it has a lot of potential, relatively little is understood about it. To use it in our treatment programs, awareness regarding it must be raised.

## **KEYWORDS:**

Artificial intelligence, Dentistry, awareness.

# UNRAVELLING THE INTERPLAY OF NOMOPHOBIA, SLEEP PATTERN & ACADEMIC PERFORMANCE: A MIXED-METHOD STUDY

Abdal Ahmad, Hamza Farooq, Malik Aman Ullah and Malak Tariqullah.  
Peshawar Medical College, Peshawar

## INTRODUCTION:

Nomophobia, the fear of being detached from mobile phones is critical to both physical and mental health.

## OBJECTIVE(S):

1. To estimate the frequency of nomophobia, sleep pattern, and their effects on academic Performance.
2. To gauge student's perspectives on relevant factors through qualitative interviews.

## METHODOLOGY:

This Sequential Explanatory mix method study was conducted from October 2023 to February 2024 and included medical and dental students of Peshawar. Participants completed questionnaires comprising of the smart smartphone Addiction Scale, and the Pittsburg Sleep Index Scale, while academic performance was taken through grading scales. Students were also interviewed for their perspectives. Quantitative data were analyzed using SPSS v.25 and interview transcripts underwent thematic analysis.

## RESULTS:

Among 364 participants, the mean age was  $21.77 \pm 1.25$  years. Two-thirds have a high risk of phone addiction ( $n=213$ , 58.5%) and three-quarters reported worse sleep quality ( $n=280$ , 76.9%). Males have significantly worse sleep quality but have less smartphone addiction ( $p=0.000$ ). A significant positive correlation was found between smartphone addiction and sleep quality ( $p=0.000$ ), but no effects on academic performance ( $p>0.01$ ). Thematic analysis generated 151 codes, converged into 35 categories, and finally 6 themes emerged. 1. Vital and lethal addiction 2. Tech tether: unmasking smartphone strains sleep and Academics 3. Digi-distress: Nomophobia's psychological grip 4. Reasons for addiction and sleep disturbance 5. Balancing time, family, and addiction awareness 6. Strategies to tackle addiction and boost sleep quality.

## CONCLUSION:

The study shows the high prevalence of smartphone addiction and worsened sleep quality among medical students. Students are using different coping strategies but need timely psychological support.

## KEYWORDS:

Nomophobia, Sleep patterns, Academic performance, Medical Students.

# **AWARENESS OF BASIC LIFE SUPPORT AMONG UNDERGRADUATE MEDICAL STUDENTS OF PESHAWAR**

**Mohib Ullah Khan, Muhammad Uzair, Faisal Umar**  
Peshawar Medical College

## **INTRODUCTION**

Emergencies like sudden cardiac arrest, heart attack, and stroke have severe outcomes however, prompt administration of Basic Life Support (BLS) by healthcare providers until expert medical aid comes can greatly enhance survival rates for individuals in critical situations.

## **OBJECTIVE(S):**

1. To determine the awareness of BLS among Undergraduate medical students in district Peshawar.
2. To compare the awareness of BLS knowledge of basic year students with clinical year students.

## **METHODOLOGY:**

A comparative descriptive study was conducted amongst undergraduate medical students of Peshawar. The sample size was 278 with 95% confidence interval, 5 % margin of error, 50% population proportion, and population size selected as 1000. A structured validated tool with 20 questions was used with a serial sampling technique. Descriptive statistics was calculated with frequency, percentages, and standard deviation. Inferential statistics were carried out with Chi-Square with a significant value of 0.05 using SPSS 24.0.

## **RESULTS:**

Among the participants, 95% (266) knew the abbreviation of BLS, however first initial response towards an unresponsive person was correctly answered by only 12% (34). Immediate reaction of the person was only answered by 55% (153), chest compression location was identified by 64% (178), infants chest compression correct method was answered by 54% (154), and contraindications to CPR were known by 49% (138). The depth of compression in adults was known by 46% (130), however, in infants was 50% (140). Chest compression and ventilation ratio in a new born was answered by only 36% (101).

## **CONCLUSION:**

The knowledge and awareness of BLS among basic year students was very poor as compared to clinical year students. Training in this regard is mandatory.

## **KEYWORDS:**

Knowledge, Awareness, Basic Life Support, Undergraduate, Students.

# **ASSOCIATION OF LEARNING STYLE WITH ACADEMIC ACHIEVEMENT IN MEDICAL STUDENTS OF PESHAWAR MEDICAL COLLEGE**

**Syed Abdullah Faisal, Faiz UI Hassan Gilani**  
Peshawar Medical College

## **INTRODUCTION:**

Learning style has been defined as the characteristic cognitive, affective, social and physiological behaviors that serve as relatively stable indicators of how learners perceive, interact with, and respond to the learning environment. Various methods have been developed to measure learning strategies, including the Visual, Aural, Read, and Kinesthetic (VARK) strategies questionnaire.

## **OBJECTIVE(S):**

1. To determine the correlation of learning styles in summative assessment of undergraduate students.

## **METHODOLOGY:**

It was a Cross-sectional descriptive study and included all five years of MBBS students of Peshawar Medical College. Data was collected from 250 students through a pre-validated VARK strategies questionnaire. Their final professional results were taken from the Department of Medical Education and were classified into Uni-modal, Bi-modal, tri-modal, and Quard-modal on several learning styles that students preferred to use. The data was analysed taking through descriptive statistics using SPSS 26.0.

## **RESULTS:**

Out of 250, 224 students filled and returned the proforma while 26 were dropped out. 92 were male while 132 (58.9%) were female. 10 (4.4 %) students used Uni-modal, 86 (38.3%) used Bi-modal, 110 (49.1%) used Tri-modal and 18 (8%) used quard-model. female students (52.2%) prefer trimodal while males (45%) prefer bimodal. the highest marks mean percentage was in students using the Quard model 78.79% followed by the Tri-modal 75%, the Bi-model 73%, and the Uni-modal 71%.

## **CONCLUSION:**

The Quard model may suggest that the VARK style is useful among the other learning styles for achieving the highest score in an exam.

## **KEYWORDS:**

Learning style, VARK, Academic performance.



# **SPACED REPETITION AS A LEARNING TECHNIQUE: FREQUENCY OBSTACLES, PATTERNS, AND ACADEMIC IMPACT AMONG MEDICAL AND DENTAL STUDENTS - A MIXED METHOD STUDY**

**Muhammad Uzair Saljoqi**, Muhammad Moosa Rabbi, Saad Hussain Qazi, Muhammad Asim, Eisa Abdullah, Muhammad Hassan Majid Paracha  
Peshawar Medical College, Peshawar

## **INTRODUCTION:**

Spaced education, inspired by Paul Kelley's technique, emphasizes repetitive reviews to transfer information from temporary to long-term memory. Our study explores the impact of spaced repetition on medical knowledge retention, aiming to bridge the gap between theory and application.

## **OBJECTIVE(S):**

1. To assess the frequency of medical and dental students using spaced repetition as a learning technique.
2. To Identify potential challenges that hinder these students from adopting this technique.
3. To examine the patterns and intervals at which students implement spaced repetition in their studies.

## **METHODOLOGY:**

A Mixed Method Sequential Explanatory Design study was carried out among students of 2 medical colleges in Peshawar from Dec 23 to Feb 24. A survey was taken from 267 students selected through stratified random convenience sampling. The students who employed the spaced repetition technique were interviewed.

## **RESULTS:**

Out of 267 participants, 50.7% were males, and 35.5% of participants were familiar with spaced repetition. Furthermore, 56.3% of students utilized summaries as a form of spaced repetition. In the qualitative analysis, three themes were identified "familiarity and tools for space repetition", "learning through spaced intervals", and "challenges and support for space repetition". It was found that participants used diverse tools for understanding. Challenges included procrastination, workload, and time constraints. Participants suggested institutional initiatives to promote awareness and support for space repetition.

## **CONCLUSION:**

Students are less familiar with spaced repetition and face challenges such as procrastination, workload, and time constraints, suggesting the need for institutional support.

## **KEYWORDS:**

Spaced Repetition, Cramming, Retrieval Practice

# **EFFECT OF CO-CURRICULAR ACTIVITIES ON ACADEMIC PERFORMANCE AND GENERAL SELF-EFFICACY OF MEDICAL AND DENTAL STUDENTS- A MIXED STUDY**

**Maha Rehman**, Samra Javed, Qurat ul Ain Riaz, Aye Noor  
Peshawar Medical College

## **INTRODUCTION:**

Co-curricular activities have been used alongside the formal curriculum to achieve the holistic development of the students. Academic performance is the extent to which a student, teacher, or institution has achieved their academic goals. General self-efficacy is the belief in one's competence to cope with challenging encounters.

## **OBJECTIVE(S):**

1. To measure the frequency of students participating in CCAs
2. To assess the effect of CCAs on academic performance and self-efficacy of the students
3. To qualitatively explore the perspective of students regarding CCAs

## **METHODOLOGY:**

A mixed method study was done at PMC and PDC from September 2023 to February 2024 among undergraduate students. During Phase 1, the students participated in the cross-sectional survey and completed a questionnaire consisting of APS and GSE. During Phase 2, 2 FGDs with students who participate in co-curricular activities were conducted.

## **RESULTS:**

Out of 270 students, 149 females, 121 males. 78% of students were from MBBS, 22% from BDS. 88% of students participate in CCAs, 22% don't. Most male students chose sports as their favorite CCA, females mostly opted for social welfare. Most students participating in CCAs showed good performance on APS, female students showed slightly better academic performance than male students. Most students participating in CCAs have also shown good general self-efficacy. In a thematic analysis of the data, 6 themes were generated, including "Type of activity", "personal growth and development", "mental well-being", "impact on academics", "enabling factors", "disabling factors",

## **CONCLUSION:**

Students participating in CCAs have shown better academic performance and general self-efficacy as compared to students who don't take part in CCAs.

## **KEYWORDS:**

Co-Curricular Activities, General Self-Efficacy, Academic Performance, Undergraduate Medical Students.

# **STRATEGIES FOR PASSING THE FELLOW OF COLLEGE OF PHYSICIANS AND SURGEONS OF PAKISTAN (FCPS) FELLOWSHIP ENTRANCE EXAMINATION: QUALITATIVE STUDY OF THE VIEWS OF THE DOCTORS IN RESIDENCY TRAINING**

**Syed Abdullah Faisal**, Faiz Ul Hassan Gilani, Syed Suleman Faisal  
Peshawar Medical College

## **INTRODUCTION:**

The FCPS examination in Pakistan is a significant milestone for medical professionals pursuing specialized careers. Success in these examinations often requires rigorous preparation, strategic planning, and perseverance. This study aims to explore the factors influencing success in FCPS examinations through the perspectives of medical professionals who have undergone the process.

## **OBJECTIVE(S):**

1. To Explore the factors leading to success in FCPS examination from the resident's perspective after failure in their first attempt
2. To identify the barriers involved in achieving success in the first attempt and how to overcome those barriers
3. To compare the approach to exam preparation by doctors who cleared Part 1 exam in first attempt and to those who passed in subsequent attempts.

## **METHODOLOGY:**

A qualitative study was conducted by interviewing ten participants selected through purposive sampling. The sample included participants who had passed FCPS examinations in two or more attempts. The participants were asked about their preparation strategies, motivations, challenges faced, and suggestions for improvement. The responses were coded, categorized, and analyzed to identify common themes and patterns.

## **RESULTS:**

The themes identified were "success factors" and "challenges". Success factors included book selection, study resources and schedule, time management, senior support, and motivation. Challenges faced were time constraints and distractions. Whereas a strategic approach, clear goals and pathways, strong basics, and conceptual understanding were suggested as strategies for juniors to improve their pass rate.

## **CONCLUSIONS:**

The findings underscore the multifaceted nature of success in FCPS examinations, highlighting the need for comprehensive preparation, effective time management, and a resilient mindset. The study also emphasizes the importance of peer support, mentorship, and clear career goals in navigating the challenges associated with these examinations.

## **KEYWORDS:**

FCPS Examination, Medical Professionals, Success Factors, Preparation Strategies, Qualitative Study.



**PUBLIC HEALTH**



# KNOWLEDGE, ATTITUDE, AND PRACTICE (KAP) STUDY ON DENGUE FEVER AMONG MEDICAL STUDENTS IN DERA ISMAIL KHAN, PAKISTAN

Nawazish Ali, Mohammad Osama, Mohammad Khalid, Muazzam Jamal  
Gomal Medical College, Dera Ismail Khan

## INTRODUCTION:

Dengue is a public health problem and a leading mosquito-borne viral disease. It has caused many outbreaks in Pakistan.

## OBJECTIVE(S):

1. To find frequency, distribution, and association of KAP regarding dengue fever among students with gender and type of students.

## METHODOLOGY:

This descriptive cross-sectional study using stratified random sampling was conducted in GMC from 1-6-2023 to 24-9-2023. Sample size 235, an equal proportion of students were randomly selected. A self-administered questionnaire was used. Data was analyzed using descriptive statistics by SPSSv23. For inferential statistics, 95%CI was used and  $p < 0.05$  was considered significant.

## RESULTS:

Among 235 students, 111 (47.3%), and 214 (91.1%) had good knowledge and attitude respectively. Most of the students had heard about dengue, but few accurately knew how *Aedes* looked, its peak biting time. While 127 (54%) had good Preventive practices, 65% used mosquito repellents, and 58% used mosquito nets. Among 179 male students, 88 (49.2%), 162 (90.4%), 89 (49.8%) had good KAP respectively. Among 56 females, 23 (41%), 52 (93%), 38 (68%) had good KAP respectively. There was no association of KAP with gender. Among 87 pre-clinical students, 29 (33%), 77 (89%), 44 (51%) had good KAP respectively. Among 148 clinical students, 82 (55%), 137 (93%), 83 (56%) had good KAP respectively. There was an association between knowledge and Type of students at  $p = .002$ . No correlation between Attitude and practice with the type of students.

## CONCLUSION:

47%, 91%, and 54% of students had good KAP respectively. KAP wasn't associated with gender. The type of students associated with knowledge while attitude and practice weren't significant.

## KEYWORDS:

Dengue Fever, Attitude, Medical Students.

# **EXPLORING LOCAL COMMUNITY AND HEALTH MANAGERS PERSPECTIVES REGARDING DETERMINANTS FOR POOR MATERNAL HEALTH IN KHYBER PAKHTUNKHWA: A MIXED METHOD APPROACH**

**Wahab Zia**, Aqsa Haider, Hammad Ali, Umar Anwar, Syed Izaz Ahmad, Tooba Manzoor Ahmed, Sundas, Nasar Ahmad, Hafiz Shayan Ahmad, Muhammad Adeel Khan, Areesha Israr, Talha Anwar, Adam Saeed  
Khyber Medical College, Peshawar

## **INTRODUCTION:**

The basic indicators to judge any country's quality of life and socioeconomic situation are its mother and child mortality rates. In reference to life expectancy, and maternal and child mortality status: Pakistan's figures are somewhat discouraging as compared to other regional countries.

## **OBJECTIVE(S):**

1. To discover the reasons for the failure to meet SDG targets by interviewing the local population and health managers regarding poor maternal health.

## **METHODOLOGY:**

A mixed methods approach was used. Using a Semi-structured questionnaire, the quantitative data was collected from 324 ladies visiting primary health care facilities in rural areas of Peshawar. The qualitative data was collected by interviewing 12 health managers from the DGHS office and Health Secretariat. The data was analysed via SPSS version 22 and interviews were analysed via manual thematic analysis. The study was conducted from April 2023 till Oct 2023.

## **RESULTS:**

The response rate of the local community was 73%. Out of the total 281 participants, 29.54% of participants had a positive history of miscarriage/abortion. Statistically significant associations were found between Gravidity and history of miscarriage/abortion and between education and antenatal consultations. The health managers highlighted issues about stewardship role, HR, Finances, Health Infrastructure, Logistics supply, and Health information systems.

## **CONCLUSION:**

Target 13.1 set by SDG is to reduce the global maternal mortality ratio to less than 70 per 100,000 live births by 2030. The MMR in Pakistan was 186 per 100,000 live births in 2019 which is still very high.

## **KEYWORDS:**

Maternal health, Health services accessibility, Maternal mortality



# **ASSOCIATION OF STUTTERING WITH CHILDHOOD TRAUMA AND ITS EFFECTS ON MENTAL HEALTH**

**Urooj Khan**, Muhammad Azam, Muhammad Adnan, Wafa Idrees  
Khyber Medical College, Peshawar

## **INTRODUCTION:**

Stuttering is a speech disorder characterized by disruptions in the normal flow of speech, involuntary repetitions of sounds or words, and prolonged pauses. It typically affects children during the early stages of language development.

## **OBJECTIVE(S):**

1. To explore the association of stuttering with childhood trauma and its impact on mental health among medical students.

## **METHODOLOGY:**

A qualitative study was conducted among students at different medical colleges across KPK aged 18-24. This study was completed in six months from September 2022 to March 2023. For this study, a non-probability sampling technique, "Snowball Sampling" was used. This chain referral technique enabled us to interview selective participants. Although the sample size was 15, the data collection ceased after 12 in-depth interviews. The data then analysed is grouped into four themes which give an insight into repeating patterns and variations.

## **RESULTS:**

The results revealed a strong link between stuttering and childhood trauma. While sharing their personal life experiences, participants reported intense levels of fear, social anxiety, and lack of confidence. Multiple coping mechanisms were revealed as effective approaches to managing stuttering including speech therapy, switching languages, exposure to public speaking, and many more.

## **CONCLUSION:**

In conclusion, this study highlights the importance of self-awareness for people who stutter. By acknowledging their limitations, stutterers can build confidence. Moreover, psychological support and patient care may help stutterers cope with their inability to communicate and live a quality life.

## **KEYWORDS:**

Stuttering, Childhood Trauma, Mental Health, Social Anxiety, Speech Therapy.

# **ASSESSMENT OF ORAL HEALTH BEHAVIOUR, KNOWLEDGE AND PRACTICE AMONG MEDICAL AND DENTAL UNDERGRADUATES OF PESHAWAR MEDICAL AND DENTAL COLLEGE**

**Oullayia Haram Jehan**, Aqsa Manahil Jehan  
Peshawar Medical and Dental College, Peshawar

## **INTRODUCTION:**

Oral health plays an important role in overall health. As medical and dental students are responsible for creating awareness and promoting oral health among non-medical people, it was, therefore, necessary to assess their knowledge about oral health, and their behaviour and practice towards it.

## **OBJECTIVE(S):**

1. To assess the behaviour of medical and dental students regarding oral health.
2. To assess the knowledge of medical and dental students regarding oral health.
3. To assess the practice of medical and dental students regarding oral health.

## **METHODOLOGY:**

The study was a descriptive cross-sectional study done through a convenience sampling method conducted on students of Peshawar Medical and dental college for a time duration of 2 months. 385 students participated in the study. Participants were given a three-part questionnaire to fill out. SPSS version 25 was used to analyse the data.

## **RESULTS:**

The result of Knowledge shows that 91.9% of undergraduates' students think that sugar promotes tooth decay. The behaviour part reflects that 96.4% of students consider taking care of oral health is important but the incidence of visiting a dentist per year for a routine check-up is only 12.2%. Practice regarding oral health concludes that Miswak is the most common oral hygiene aid used. 91.9% of students do not smoke and maintain good care of oral health.

## **CONCLUSION:**

Most of the students are aware of the importance of oral health and are taking care of their oral cavity.

## **KEYWORDS:**

Oral health, Students, Knowledge, Behaviour.

# **AWARENESS AND EFFECTS OF CAFFEINE CONSUMPTION ON SLEEP PATTERNS AMONG MEDICAL STUDENTS**

**Malaika Babar**, Muhammad Khizer Ilyas, Maleeha Zaman, Mahmood, Nimra Abdul Khaliq, Zunaira Khattak, Namra Gul  
Pak International Medical College (PIMS), Peshawar

## **INTRODUCTION:**

Caffeine is one of the most widely consumed psychoactive stimulants by more than 80% of the world's population. The excessive use of caffeinated drinks by medical students has a detrimental effect on sleep quality.

## **OBJECTIVE(S):**

1. To determine caffeine awareness and its impact on sleep patterns among medical students in district Peshawar.

## **METHODOLOGY:**

A cross-sectional study was conducted from the month of May to June 2023 with a sample size of 400 with a convenient sampling technique among undergraduate medical students. A non-validated Caffeine Consumption Questionnaire (CCQ) and a validated standard PSQI scale were used for sleep and caffeine assessment. Individuals were divided into 3 groups based on low (58+29mg/day), moderate (143+25mg/day), and high (351+139mg/day) caffeine consumption daily. MS Excel and SPSS were used for data analysis.

## **RESULTS:**

Out of 400 participants, 391 participated while n=198, (50.6%) were males and n=192, (49.1%) were females. Most participants consumed five various caffeinated drinks and beverages with n=67 (17.1%) thinking of coffee and Red-Bull to be the most caffeinated drinks while n=75 (19.2%) think that chocolate milk and Mountain Dew contain the least amount of caffeine. n=129, (32%), soft drinks to be their favorite caffeinated drink n=93, (23.8%) students had their last caffeinated drink from noon to 3:00 pm. PSQI scores were high 10 (8-16) in highly caffeinated, moderate 7 (5-9) in moderately caffeinated, and low 6 (1-6) in low caffeinated individuals.

## **CONCLUSION:**

The study concludes that the increase in PSQI scores in highly caffeinated students indicates that caffeine is responsible for causing sleep deprivation.

## **KEYWORDS:**

Caffeine, Sleep, Awareness, Drinks.

# **PATIENT SATISFACTION WITH THE SERVICES PROVIDED IN THE ACCIDENT AND EMERGENCY DEPARTMENT: A COMPARISON OF MTI AND NON-MTI HOSPITALS**

**Ashraf Ali**, Khulood Nisar, Shah Zeb, Habiba Chand, Maria Waseem, Tariq Jameel, Abdul Basit, Gul  
Haram Zaib, Saad Khan, Haroon Khan.  
Khyber Medical College, Peshawar

## **INTRODUCTION:**

Previously all medical hospitals were under the supervision of the government. The MTI Act was implemented in the year 2015, which brought a huge change in the system. According to this reform, medical institutions and their affiliated hospitals were under the control of BOG which would bring more autonomy and better healthcare availability and the presence of senior specialists in the MTI institution.

## **OBJECTIVE(S):**

1. To find the level of patient satisfaction in the emergency department of MTI and Non-MTI hospitals.

## **METHODOLOGY:**

A cross-sectional study was conducted in two MTI hospitals Khyber Teaching Hospital and Lady Reading Hospital, Peshawar, and two Non-MTI hospitals Saidu Group of Teaching Hospital, Swat, and Naseer Ullah Khan Babar Memorial Hospital, Peshawar, from February 2022 to July 2023. Non-probability convenient sampling technique was used to gather the opinion of 265 patients. Data was analyzed using SPSS version 25.

## **RESULTS:**

Among 265 participants (67.7% males and 32.3% females), the level of satisfaction after visiting MTI hospital was very good in 63.3% of people. We also got significant p-values for variables like satisfaction from doctors (0.032), satisfaction from nurses (0.001), type of treatment provided (0.001), laboratory services (0.001), general conditions of ER (0.001), availability of medical equipment (0.001) and affordability (0.02), leading to proving our hypothesis that these services are better in MTI than non-MTI hospitals.

## **CONCLUSION:**

The satisfaction of patients from MTI institutions was higher on account of the provision of facilities like skilled lab persons, advanced Instrumentations, and highly qualified specialists, and due reason that treatment provided to them was affordable.

## **KEYWORDS:**

Patient Satisfaction, Laboratories.

# PSYCHOLOGICAL IMPACTS ON EPILEPTIC PATIENT'S CARETAKERS: A HOSPITAL-BASED SURVEY IN KHYBER PAKHTUNKHWA

**Saman Naveed Khattak**, Umama Malik, Laiba Bakhthiar, Samra Israr  
Pak International Medical College, Peshawar

## INTRODUCTION:

Epilepsy is a neurological disorder characterized by a predisposition to generate seizures due to the brain's abnormal electric activity. Epileptic patient's caretakers are often neglected. Dealing with Epileptic patients, caretakers suffer from several psychiatric conditions.

## OBJECTIVE(S):

1. To determine psychological impacts on epileptic patient's caretakers.

## METHODOLOGY:

A descriptive cross-sectional study was conducted from April 2022 to July 2022 on a sample of 71 caregivers from KP tertiary care hospitals was collected. A convenient sampling technique was used with 95% confidence interval and 5% precision error. Zarit Caregiver Burden Inventory validated questionnaire and sociodemographic chart was used to collect the data. Data was analyzed using SPSS version 25.

## RESULTS:

A total of 71 caregivers 36 (50.7%) males, and 35 (49.3%) females, were classified into age groups, 18-27 years n=21 (29.6%), 28-38 years n=24 (33.8%), 40- 50 years n=15.5 (21%), 50-60 years n=11 (15%). Living in rural areas n=23 (32.4%), urban areas n=48 (67.6%). Overall burden; maximum responses, n=48 (67.6%), afraid for relative future n=43 (60.6%) stained when around relative n=41 (57.7%), not enough time for self n=25 (35.2%); Social life sufferance n= 24 (33.8%); caretakers health suffering n=23 (32.4%). Association between other factors like embarrassment over relatives' behavior, anger, and relative dependency were found insignificant  $p > 0.05$ .

## CONCLUSION:

It was concluded that factors such as overall burden, wearisomeness for patients' conditions, future life, social life and health sufferance, lack of money, and lack of time for other responsibilities through which caregivers were suffering had several psychological impacts on caregivers.

## KEYWORDS:

Epilepsy, Hospitals, Caregivers, Caregiver Burden.

# **PREVALENCE OF GAMING ADDICTION AND ITS IMPACT ON SLEEP QUALITY: A CROSS-SECTIONAL STUDY FROM COACHING ACADEMIES IN BOARD BAZAR, PESHAWAR**

**Huda Rashid, Aleena Farooq**  
Rehman Medical Institute, Peshawar

## **INTRODUCTION:**

The internet's rapid growth has revolutionized life across the border. The gaming industry, leveraging this trend, has provided online gaming with benefits like improved quality and social connections. Yet, the downside is its addictive nature, resulting in prolonged gaming sessions and health issues, including sleep problems.

## **OBJECTIVE(S):**

1. To determine association between the internet gaming disorder on the sleep quality of students
2. To study the occurrence of internet Gaming Disorder among students.

## **METHODOLOGY:**

A cross-sectional study involved 400 students (ages 13-18) from renowned coaching academies in Peshawar (Science Coaching Academy, Quality Coaching Academy, and Khan Coaching Academy), employing the gaming addiction scale (GAS) and Pittsburgh Sleep Quality Index (PSQI) to assess gaming addiction and sleep quality. Data collection was interview-based. Data will be entered and analyzed by using IBM SPSS version 25 for Windows. The sampling technique is convenience sampling from a specified population. The duration of the study was 3 months after submission of the synopsis (Aug 2023 to Oct 2023).

## **RESULTS:**

Out of 400 participants, 75% were regular online gamers, primarily male under 18. Poor sleep quality was common with many students going to bed between 12 am to 2 am. Gaming addiction was prevalent, with around 50% of gamers considered problem gamers and 11.3% addicts.

## **CONCLUSION:**

Gaming addiction is common among Peshawar's academy students and affects sleep quality. Raising awareness about the consequences of excessive gaming is essential to mitigate gaming addictions and promote healthier lifestyles among young people.

## **KEYWORDS:**

Online Game Addiction, Sleep Quality, Academy Students, Gamers.

# ASSESSMENT OF PREVALENT AIRBORNE DISEASES IN CHILDREN, PESHAWAR

Saifullah Burki, Malaika Rafi, Qasim, M.Saad, Ukasha, Yahya Khan, Nimra Areej  
Kabir Medical College, Peshawar

## INTRODUCTION:

In pediatric health, children's vulnerability to airborne diseases is a significant concern. The literature provides insights into assessing prevalent airborne diseases in children. This study aimed to assess airborne disease incidence in Peshawar during the winter season.

## OBJECTIVE(S):

1. To assess the incidence of airborne diseases among the population of Peshawar during the winter season.

## METHODOLOGY:

A retrospective study was conducted at three hospitals in Peshawar from January to April 2023. Data from 300 patients' guardians was collected via questionnaires, excluding asymptomatic patients and adults. Systematic or Convenience sampling was used in this study. Data analysis was done using SPSS version 25.

## RESULTS:

Results showed a higher proportion of females (51%) than males (49%). Patients under 6 months had a 42% incidence of pneumonia, while those aged 6-12 months had 27.3% bronchiolitis cases. Over 12 months, pneumonia was prevalent (30.7%). Pneumonia (24.3%) and bronchiolitis (21.3%) were most frequent, followed by measles (11%), coughing/tuberculosis (8.6%), influenza/common cold (6.3%), mumps (6%), diphtheria (4%) and chickenpox (3.3).

## CONCLUSION:

This study emphasizes a high prevalence of pneumonia (24.3%) and bronchiolitis (21.3%) in children up to 2 years old during winter. It reinforces the heightened risk of airborne diseases in children during this season, especially pneumonia and bronchiolitis.

## KEYWORDS:

Airborne Disease, Pneumonia, Bronchiolitis, Tuberculosis, Mumps.

# **PREVALENCE OF BODY DYSMORPHIC DISORDER AMONG MEDICAL STUDENTS AND GENDER DISPARITIES**

**Muhammad Salman**, Muskan Ikram, Dua Samee, Sayed Hamza.  
Kabir Medical College, Peshawar

## **INTRODUCTION:**

BDD is a psychological disorder characterized by an obsessive preoccupation with perceived defects or flaws in one's appearance. Medical students are at an increased risk of developing BDD, given their exposure to rigorous academic demands and the pressure to maintain high standards of physical appearance. The prevalence of BDD in the general population is estimated to be 1.9%.

## **OBJECTIVE(S):**

1. To determine the prevalence of body dysmorphic disorder (BDD) among medical students in Khyber Pakhtunkhwa and gender-based differences.

## **METHODOLOGY:**

A cross-sectional study was conducted in the medical colleges of Khyber Pakhtunkhwa, in which a total of 450 students participated using a convenient sampling technique. The data collection involved the administration of a standardized questionnaire to medical students. The data obtained was analysed using SPSS version 26.0.

## **RESULTS:**

The mean age was  $22 \pm 2.30$ . The prevalence of BDD among medical students was 49.6 with a higher prevalence among males. Facial features and hair were the predominant areas of concern, with 32.2% and 27.8%, respectively. The cross-tabulation of gender with specific body parts of concern. Notably, facial features and hair were more frequently cited concerns among females, while muscle build and height were more commonly mentioned by males.

## **CONCLUSION:**

The BDD is prevalent among medical students, particularly among males. The features and hair are the most common areas of concern.

## **KEYWORDS:**

Body Dysmorphic Disorder, Hair, Facial, Medical, Students.



# **EMPOWERING WOMEN'S HEALTH: A SURVEY ON UTI AWARENESS AMONGST THE FEMALE COMMUNITY OF HAYATABAD PESHAWAR**

**Hira Shah**, Hoor Fatima, Okasha Khan, Afnan Jehanzeb, Noor Sakeena and Dr. Shehla Akbar  
CECOS University of IT and Emergency Sciences.

## **INTRODUCTION:**

The study aimed to determine the prevalence and awareness of vastly spreading urinary tract infections amongst the female community of KP, (Hayatabad, Peshawar) Pakistan. It also focused on the malpractices adopted by the targeted community due to the lack of knowledge.

## **OBJECTIVE(S):**

1. To Evaluate Awareness level in the female community.
2. To Communicate potential complications of untreated Urinary Tract Infections

## **METHODOLOGY:**

A cross-sectional survey was conducted among 330 females aged 18-45 years, using questionnaires distributed online and in person. The study collected data on age, occupation, UTI knowledge, medication, symptoms, attitude and awareness through visits to hostels, workshops, home and University (CECOS).

## **RESULTS:**

The results showed that UTI prevailed in 52.2% of the sample while 28.8% of the participants considered it as non-serious condition. Despite 88.8% being aware of UTI, many were unaware of the kidney involvement. Crannmax sachet and antibiotics were popular choices for those who experienced UTIs. Regarding healthcare-seeking behavior, 48.8% would seek medical attention, 33% self-medicated and 18.2% believed UTIs would resolve on their own. Additionally 24% thought UTIs were sexually transmitted. Notably, 21.5% felt ashamed of discussing UTI problems. The spread of UTI closely related to poor hygiene, dirty washrooms, limited access to clean water and crowded facilities.

## **CONCLUSION:**

This study underscores the need for targeted educational initiatives in Hayatabad, Peshawar. Spreading awareness and knowledge of UTI is very necessary as it leads to severe complications such as pyelonephritis, sepsis, kidney damage and disseminated infection.

## **KEYWORDS:**

UTI, Awareness, Healthcare-Seeking Behavior, Educational Initiatives, Hygiene, Complications.

# **TO STUDY KNOWLEDGE, ATTITUDE, AND PRACTICE AMONG MEDICAL STUDENTS IN PESHAWAR TOWARD THE INAPPROPRIATE USE OF ANTIBIOTICS**

**Faiza**, Gohar Farooq Khan, Hassam Rahat, Gohar Zaman, Fatima Hassan, Haris Abbas, Hamza Maqsood  
and Syed Sanan Shah  
Northwest School of Medicine, Peshawar

## **INTRODUCTION:**

The decline in the effectiveness of antibiotics is a sign of antibiotic resistance. This issue is causing infections that were once easily treated to become extremely dangerous. Even basic medical procedures like chemotherapy and organ transplants can now be risky. Treating antibiotic-resistant conditions requires more time and complex therapies, leading to higher healthcare costs for patients, their families, and healthcare systems.

## **OBJECTIVE(S):**

1. To assess medical students' knowledge, attitude, and practice regarding antibiotic use and its resistance.

## **METHODOLOGY:**

A cross-sectional descriptive study of sample size 380 was carried out on students of Northwest School of Medicine, Rehman Medical College, Pak International Medical College, and Khyber Girls Medical College. Data was collected via a non-probability convenient sampling technique using a self-administered questionnaire. SPSS version 21 was used to analyze the data.

## **RESULTS:**

This study explored medical students' knowledge, attitudes, and practices regarding antibiotic misuse. Females outnumbered males (57.9% vs. 42.1%). The data indicated that 34.2% of the students reside in rural areas, while 65.8% live in urban areas. Out of the 380 participants, 37.36% had good knowledge, 44.32% had a good attitude, and 57.89% showed good practices. However, concerning findings showed that 32.9% felt confident in self-medicating with antibiotics, 62.1% stopped taking antibiotics when symptoms improved, and 38.7% admitted to sharing antibiotics.

## **CONCLUSION:**

This study suggested a need for education and awareness campaigns to foster responsible antibiotic use and counter-resistance. Because medical students are the future healthcare providers and their attitudes and behavior can impact public health outcomes, addressing knowledge gaps, correcting misunderstandings, and promoting responsible antibiotic practices are vital to compete against antibiotic resistance.

## **KEYWORDS:**

Antibiotics, Medical Student's knowledge, Awareness.

# EFFECTIVENESS OF DIGITAL INTERVENTION FOR BETTER MATERNAL AND CHILD HEALTH

Haida Asghar, Kinza Haroon, Arsalan Khan, Haiqa Azhar, Ayesha Zaheer  
Fazaia Medical College, Islamabad

## INTRODUCTION:

Antenatal care is critical for maternal and child health, yet in remote areas of Pakistan, healthcare services are minimal. Introducing a free local language antenatal care app addresses this gap, offering essential health education and improving healthcare accessibility for women in distant regions.

## OBJECTIVE(S):

1. To provide health education about antenatal care through cost-effective and easily accessible mobile apps linked to YouTube channels, especially to underprivileged females for better maternal and child health.

## METHODOLOGY:

In a quasi-experimental interventional study at Fazaia Medical College, Islamabad (January to September 2023), 60 pregnant females from PAF Unit 1, class 4, were selected via purposive sampling. After obtaining consent, participants were divided into two groups using random sampling: one receiving an app-based intervention and the other following traditional guidance. Both groups underwent EPDS and a self-structured questionnaire assessment. Statistical analysis using SPSS 23 included frequencies, percentages, chi-square, and independent t-tests.

## RESULTS:

Participants, primarily aged 18-25 with higher secondary education, exhibited significant differences ( $p=0.021$ ) in EPDS scores between control and intervention groups. High app usage ( $>90\%$ ) correlated strongly with decreased EPDS scores ( $p=0.000$ ). Younger age, higher education, lower income, being a housewife, more children, and advancing pregnancy stages were associated with higher EPDS scores. Lack of exercise correlated with elevated scores, while variables like nutritional knowledge, family support, and physical abuse showed no significant associations.

## CONCLUSION:

The app, as a supplementary source of antenatal health education, proved beneficial in reducing maternal depression scores, highlighting its potential significance in enhancing maternal well-being.

## KEYWORDS:

Antenatal Care, Perinatal Care, Reproductive Health.

# **GASTROESOPHAGEAL REFLUX DISEASE (GERD) AMONG HOSTELITE AND NON-HOSTELITE UNIVERSITY STUDENTS OF TWIN CITIES AND ITS ASSOCIATION WITH LIFESTYLE FACTORS**

**Muhammad Ahmed**, Sara Asif, Javeria Abbas, Zainab Naeem, Saadia Khalid  
Fazaia Medical College, Islamabad

## **INTRODUCTION:**

Gastrointestinal Reflux Disease (GERD) is a prevalent chronic digestive disorder characterized by the backflow of stomach acid into the esophagus, resulting in various symptoms.

## **OBJECTIVE(S):**

1. To investigate the proportion of GERD among university students, with a main focus on hostelites versus non-hostelites, and to identify lifestyle factors associated with GERD.

## **METHODOLOGY:**

This analytical cross-sectional study conducted from Jan 2023 to Sept 2023 comprised 355 university students from twin cities. A self-administered online questionnaire was used to collect the data which was analyzed on SPSS version 23.0.

## **RESULTS:**

The majority were medical students (69.6%) residing in hostels (58.6%). A total of 24.5% of the participants had GERD, with a higher occurrence among hostelites (29.8%) and females (58.6%). Medical students had a higher GERD proportion (22%). Also, Older students were more susceptible to GERD. Notably, lifestyle factors such as eating spicy foods (P-value 0.02), overeating (P-value 0.028), frequent dining out (P-value 0.018), discomfort during sleep due to heartburn (P-value 0.000), and taking medications on an empty stomach (P-value 0.039) were significantly associated with GERD. Those who exercised daily had a lower likelihood of GERD.

## **CONCLUSION:**

This study highlights a higher proportion of GERD among hostelites, females, older students, and medical students. It underscores the impact of specific lifestyle factors on GERD development, including dietary choices, eating habits, and sleep quality. These findings emphasize the need for targeted preventive strategies, including lifestyle modifications, to reduce the burden of GERD among university students.

## **KEYWORDS:**

GERD, Lifestyle Factors, University Students.

# **DIGITAL SCREENING & ASSESSMENT OF POST-COVID-19 COGNITIVE IMPAIRMENT: A COMPARATIVE CROSS-SECTIONAL STUDY IN THE TWIN CITIES OF PAKISTAN**

**Muhammad Hamza Imtiaz**, Amna Jahangir, Muhammad Abdullah  
Fazaia Medical College, Islamabad

## **INTRODUCTION:**

The COVID-19 pandemic, caused by SARS-CoV2, has affected millions globally, with notable impacts in Pakistan. Beyond the respiratory system, the virus reaches extra-respiratory organs, particularly the CNS, causing widespread neurological symptoms like cognitive impairment. Recognizing this, further research is crucial to aid timely recognition and arrestment of symptoms.

## **OBJECTIVE(S):**

1. To improve the screening of post-COVID-19 cognitive impairment by developing a mobile application.
2. To compare the sensitivity of the application with that of conventional cognitive assessment tool MoCA paper version 7.1.

## **METHODOLOGY:**

The analytical cross-sectional study was conducted in Islamabad and Rawalpindi, from January to September 2023, using a non-probability convenient sampling technique. The data, comprising of socio-demographics, medical history, Covid-19 experience, and questions from CFQ, and MoCA, was collected from 79 participants through 'CogQuest' developed by the Computer Science Department at Air University. Data analysis employed SPSS version 23.

## **RESULTS:**

CogQuest demonstrated a sensitivity of 48% surpassing the conventional MoCA paper version 7.1's sensitivity of 44%. Statistical analysis shows no significant associations between COVID-19 infection and CFQ scores ( $P$ -value=0.799) or MoCA scores ( $P$ -value=0.881). Despite limitations, the study suggests the potential of digital tools for early detection, emphasizing their role in healthcare.

## **CONCLUSION:**

This study concluded that the digital tool, CogQuest was 4% more sensitive than the conventional MoCA paper version 7.1

## **KEYWORDS:**

Post-COVID-19 cognitive impairment, Mobile application CogQuest, Sensitivity, CFQ, MoCA.

# **REVALENCE OF PRE-ECLAMPSIA AND ITS ASSOCIATED RISK FACTORS AMONG PREGNANT WOMEN OF DISTRICT NOWSHERA (HOSPITAL-BASED STUDY)**

**Ijaz Ahmad**, Muhammad Junaid, Amna Khan, Usman Khan, Sabahat Bukahri, Samareen Gul, Laraib Zareen, Aiman Tanveer, Muhammad Owais  
Nowshera Medical College, Nowshera

## **INTRODUCTION:**

Pre-eclampsia, one of the gestational hypertensive disorders, is characterized by a new onset of systolic and diastolic blood pressures of measurements greater than or equal to 140 mm of Hg and 90 mm of Hg respectively with associated proteinuria and edema. Pre-eclampsia is developed after the 20th week of pregnancy. After pregnancy-induced hypertension, is the most prevalent hypertensive disorder of pregnancy in the district of Nowshera, KPK, Pakistan.

## **OBJECTIVE(S):**

1. To determine the prevalence of preeclampsia and its associated risk factors among pregnant women of district Nowshera.

## **METHODOLOGY:**

An analytical, cross-sectional study was conducted by fourth-year MBBS students of Nowshera Medical College in Qazi Hussain Ahmad Medical Complex, Nowshera from 3rd September 2023 to 30th September 2023. Pregnant women with gestational age above 20th week were included. The self-determined questionnaire was used for data collection. The sample size was 220 calculated by open epi calculator while keeping the confidence interval at 95% and preexisting prevalence of 4.3%. Non-probability convenient sampling technique was used. The data was analyzed by SPSS version 27.

## **RESULTS:**

According to this study, the prevalence of pre-eclampsia among pregnant women of Nowshera is 6.8%.

## **CONCLUSION:**

According to this study, the prevalence of pre-eclampsia among pregnant women of district Nowshera is 6.8% which is relatively higher than the previous research conducted in QHAMC. The most important associated factors found were twin pregnancies, family history of pre-eclampsia, previous history of higher BP, low HB level, high blood sugar level, history of cardiovascular disorders, gallstones, history of abortion/miscarriages, and most importantly, overweight BMI.

## **KEYWORDS:**

Pre-Eclampsia, Hypertension, Pregnancy, Gravidity, Parity, Gestational Age, Body Mass Index, Twin Pregnancies.

# **EXPLORING FACTORS ASSOCIATED WITH EXCESSIVE DAYTIME SLEEPINESS (EDS) IN MEDICAL STUDENTS: AN ANALYSIS USING THE EPWORTH SLEEPINESS SCALE (ESS)**

**Zahoor Ahmad Khan**, Sara Shuaib, Sulaiman Hussain, Shadab Abbas  
Northwest School of Medicine, Peshawar

## **INTRODUCTION:**

EDS is a prevalent and concerning issue among college students as it can adversely affect academic performance, lifestyle, and overall well-being.

## **OBJECTIVE(S):**

1. To examine the prevalence of EDS and its associations with various sleep-related factors in medical students of Peshawar.

## **METHODOLOGY:**

A cross-sectional study was conducted from February 2023 to July 2023 on 323 medical students from various medical colleges in Peshawar. The sample size was calculated using the WHO sample size calculator. The study assessed EDS using the Epworth Sleepiness Scale and self-report questionnaires, analyzing data using SPSS version 26.

## **RESULTS:**

Findings revealed that 69.03% had 5-8 hours of sleep, others slept less. Daytime naps were common (44.58%). Stress was occasional or frequent for 61.92%, rare or none for 38.2%. Only 23.53% had mental health issues. 52.63% managed stress, and 47.63% did not. 13.62% used no caffeine, 55.42% had 1-2 times a day. Only 29.41% exercised vigorously; others were less involved. ESS scores correlated positively with daytime naps, and stress and negatively with sleep duration, effective stress management, moderate caffeine, and daily exercise. ESS scores also positively correlated to difficulty staying awake during classes, homework, and wards.

## **CONCLUSION:**

The study links EDS to sleep-related factors in college students and emphasizes the need for healthy sleep habits, stress management, and physical activity to reduce EDS.

## **KEYWORDS:**

Excessive Daytime Sleepiness, Medical Students, Epworth Sleepiness Scale (ESS).

## **WHY STRESS? A COMPARATIVE STUDY OF PERCEIVED STRESS LEVELS AMONG WORKING AND NON-WORKING WOMEN**

**Amna Usman**, Sharjeel Shoukat, Hifza Yaqoob, Madiha Arif, Maheen Baber, Mishal Haroon, Saba Afzal, Sehar Khawaja, Faisal Rasheed, Kamran Khalid, Bilal Masood, Hurraira Arshad, M Muddasir  
Wah Medical College, Wah Cantt

### **INTRODUCTION:**

Stress in the workplace and family stress are unavoidable components due to increasing complexities and competitiveness. Everyone feels stressed, whether it is in the family, outside the family, workplace, or in a business organization. Most women feel stressed due to overcrowding or lack of motivation.

### **OBJECTIVE(S):**

1. To determine the level of stress in working and non-working women.

### **METHODOLOGY:**

The Study Design is Cross-sectional, and it was carried out in Wah Cantt for 7 months. The study used a data collection tool. After an extensive literature search, a questionnaire was constructed. A convenient sample of 288 women was taken after calculating the sample size by the WHO sample size calculator. Questionnaires were disseminated among all available working women and non-working women and were taken back after 2 days. The gathered data was entered and analyzed in SPSS version 27.0.

### **RESULTS:**

More than 51 % of the women were above 40 years of age and 79% of them were married. 56% of the women were non-working and 44% were working. 64% of the women were found to be mildly stressed. The mean stress score was  $41 \pm 10$ . There was no significant difference in stress among working and non-working women.

### **CONCLUSION:**

Our study concluded that most of the women were under mild stress and comparatively stress score of working women was higher as compared to non-working women.

### **KEYWORDS:**

Stress, Working Women, Non-working Women, Workplace, Family.



# **COMPARISON OF PHYSICAL ACTIVITIES AMONG MEDICAL AND NON-MEDICAL STUDENTS AND ITS EFFECT ON ACADEMIC PERFORMANCE**

**Zulqarnain Arif**, Muhammad Sohaib, Ayesha Latif, Malaika Fatima, Nayyab Jamil, Noor-ul-Ain Javed, Rimsha Ghaffar, Saba Tariq, Sarosh Fatima, Liaqat Ali, Syed Furqan Ali Sherazi, Muhammad Hammas Manzoor, Muhammad Arslan Azhar.  
Wah Medical College, Wah Cantt

## **INTRODUCTION:**

Physical activity is important for students to develop knowledge, attitudes, motor, behavioral, and cognitive skills and to improve their academic performance.

## **OBJECTIVE(S):**

1. To compare the prevalence of physical activity among medical and non-medical students to determine if there is an association between physical activity and academic performance.

## **METHODOLOGY:**

A cross-sectional study design was used to conduct this study at Wah Medical College and the University of Wah for a duration of six months (December 2022 to May 2023). 256 students were included by convenient sampling. A self-administered questionnaire was used to collect data. The International Physical Activity Questionnaire (IPAQ) Short Form was used to assess physical activity. It consisted of 7 open-ended questions regarding individuals' last 7-day recall of physical activity. SPSS version 23 was used for data analysis. An Independent T-test was used for continuous data and a Chi-square test for categorical variables. The P value of <0.05 was significant.

## **RESULTS:**

The non-medical students did significantly more physical activity as compared to medical students (p-value 0.007). Female students had better academic performance and physical activity than males. The mean score of vigorous physical activity was 1402.87 + 2195.519 minutes/week, moderate was 757 + 1062.587 minutes/week, and walk was 1478.61+ 1687.118 minutes/week. The relationship between physical activity and academic performance was found to be statistically insignificant (p-value 0.51).

## **CONCLUSION:**

This study revealed that the non-medical students who engaged in higher levels of physical activity compared to medical students were significant. Furthermore, non-medical students exhibited better academic performance compared to their medical counterparts.

## **KEYWORDS:**

Academic performance, Physical activity, Medical & Non-Medical students, International Physical Activity Questionnaire.

## **PRESENTATION AND OUTCOME OF DENGUE PATIENTS REPORTED TO THE POF HOSPITAL**

**M. Waseem Shahzad**, Sahar Anwar, Eman Ahmad, Iqra Altaf, Irsha Ali, Sawera Khan, Seemab Khalil, Sidra-Tul-Muntah, Abdullah Sahibzada, Hafiz M Waseem-Ullah Khan, Mashal Khan, M Waqas, Hashimn Khan  
Wah Medical College, Wah Cantt

### **INTRODUCTION:**

Dengue is a widely spreading vector-borne viral disease that has high morbidity and mortality rates. The disease can be controlled by applying a primary healthcare approach and intersectoral coordination.

### **OBJECTIVE(S):**

1. To determine the frequency and characteristics of Dengue fever in patients reported to the POF Hospital Wah Cantt.

### **METHODOLOGY:**

A cross-sectional hospital-based study was conducted in Wah Medical College from December 2022 to June 2023. Using a purposive sampling technique, the medical record of 57 patients was taken from HMIS of the hospital. The information gathered from the data was filled in the questionnaire by the research team. The data was analyzed using SPSS Version 23.

### **RESULTS:**

Patients presented with the minimum age being 3 years old and the maximum age being 72 years old. The frequency of male patients was 41 (71.9%) and female patients were 16 (28.1%). The frequencies of symptoms among patients were fever (98.2%), body aches (40.4%), vomiting (21.1%), headache (19.3%), chills (14.4%), joint pain (7%), nausea (7%), diarrhea (7%), body rash (7%), SOB (5.3%) and vertigo (3.5%). NS1 antigen was positive in 34 (59.6%), negative in 17 (29.8%) and no test was done among 6 (10.5%) patients. Diagnosis on discharge was Dengue Fever in 35 (61.4%) patients and Dengue Fever with warning signs in 22 (38.6%) patients.

### **CONCLUSION:**

It is concluded that most of the patients reported to the POF Hospital were male and their mean age mean age was 31 years. The most common presenting complaint was fever followed by body aches, vomiting, and headache. NS1 antigen is found to be negative in about 30% of patients.

### **KEYWORDS:**

Aedes Mosquitoes, Dengue Fever, NS1 Antigen.

## **KNOWLEDGE AND PRACTICE OF WEANING AMONG MOTHERS VISITING PEDIATRICS OPD OF POF HOSPITAL, WAH CANTT**

**Areeba Ishaq**, Naima Batool, Sohaib Ahmed Khan, Aliza Khalid, Aimen Razzaq, Fajr Fatima, Laiba Zahid,  
Rahat Amjad, Abdullah Iqbal, Asad Hayat, Abdul Wasay, Sami Ullah, Usama Zubair  
Wah Medical College, Wah Cantt

### **INTRODUCTION:**

Weaning is the transition of a baby from breast milk to other sources of nutrition. Complementary food is essential for growth in the first two years of life. Malnutrition occurs in 60 million children under 5 years of age worldwide. More than half of them occur due to faulty breastfeeding and weaning practices. Breastfeeding and weaning, if done appropriately, can reduce under-5 mortality by 19%.

### **OBJECTIVE(S):**

1. The objective of our study is to determine the Knowledge and Practice of weaning among mothers visiting Pead's OPD at POF Hospital. Wah Cantt.

### **METHODOLOGY:**

A cross-sectional study was conducted in the Pediatric Outpatient Department of POF Hospital, Wah Cantt from January 2023 to April 2023. A sample size of 110 was selected using a convenient sampling technique. After a thorough literature search, a questionnaire was made to assess the knowledge and practice of mothers regarding weaning. SPSS version 21 is used for analyses of the collected data.

### **RESULTS:**

According to our study, out of 110 mothers, 26% were 19-25 years, 58% were 26-35 years and 16% were 36-45 years of age. The results of our study indicated that the knowledge of 110 mothers regarding weaning was high (95%).

### **CONCLUSION:**

The maternal literacy level has a great influence on accurate weaning practices, and our study demonstrated good knowledge of mothers regarding weaning, and this is due to the high literacy rate in Wah Cantt.

### **KEYWORDS:**

Weaning, Nutrition, Cerelac, Infants.

# **A COMPARATIVE STUDY OF DOCTORS AND NURSES REGARDING THE KNOWLEDGE, ATTITUDE AND PRACTICE OF BASIC LIFE SUPPORT IN TERTIARY CARE HOSPITALS OF PESHAWAR**

**Muhammad Usman**, Irfan Ullah, Shah Fahad, Javeria Touheed, Mushrafa, Naila Aziz, Syeda Kausar  
Rufaidah Nursing College, Peshawar

## **INTRODUCTION:**

Basic Life Support (BLS) is a set of established interventions that provide sufficient oxygen to the brain during an event of cardiac arrest while cardiopulmonary resuscitation (CPR) is a practical method to treat cardiac failure victims outside clinical settings.

## **OBJECTIVE(S):**

1. To assess the knowledge, attitude, and practices of doctors and nurses regarding Basic Life Support and compare the difference in knowledge and practices between the two professions

## **METHODOLOGY:**

A comparative cross-sectional study was conducted in tertiary care hospitals of Peshawar among doctors and nurses between July 2023 and October 2023 using validated tools from previous studies. It consisted of 3 sections; demographics, knowledge and practice, and attitudes. A total of 249 participants were enrolled using convenience sampling. Data was analyzed using SPSS version 27. Mean was calculated for continuous variables. Percentages and frequencies were calculated for demographic variables. An independent samples t-test was conducted to explore associations between knowledge, practice, and demographic variables.

## **RESULTS:**

Among the study participants (249) 44 (18 doctors, 26 nurses) had good knowledge whereas only 25 (14 doctors, 11 nurses) had good practices regarding basic life support, respectively. No significant difference was found based on profession, gender, age, or experience. The participants had positive attitudes towards CPR and AED rehearsals and community projects.

## **CONCLUSION:**

The findings suggest that the majority of healthcare workers; doctors and nurses have a gap in knowledge and practice of basic life support despite having positive attitudes. To close the gap in knowledge and practice, standardized training workshops are endorsed.

## **KEYWORDS:**

Basic Life Support, Knowledge, Attitude, Practice, Doctors, Nurses, Tertiary Care Hospital, Comparative Study, Peshawar, Pakistan.

# **PREVALENCE OF INSOMNIA AMONG UNDERGRADUATE NURSING STUDENTS IN PESHAWAR**

**Ali Rahman**, Abdul Basit, Muhammad Talha, Zia Ullah, Alveena Shahzadi, Kashish, Nasira Bagum, and Summaya  
Rufaidah Nursing College, Peshawar

## **INTRODUCTION:**

Insomnia, a prevalent sleep disorder linked to psychiatric issues, involves difficulties in initiating and maintaining sleep, early awakenings, and poor restorative sleep. Studies show one-third of the general population experiences symptoms (9-19%). Among college students, 18.5% reported poor sleep quality, notably higher than the general population (7.4%).

## **OBJECTIVE(S):**

1. To determine the prevalence of insomnia among undergraduate nursing students in Peshawar.

## **METHODOLOGY:**

A descriptive cross-sectional study was conducted at the Private Nursing Institutes of Peshawar for a duration of six months from July to December 2023. A total of 377 participants of both genders were presented in this study through a convenient sampling technique. Participants detailed demographics; age, gender, marital status, academic year, and socioeconomic status were recorded after obtaining written consent. Participants were aged between 18-25 years. The frequency of insomnia was calculated by using the Athens Insomnia Scale (AIS). Complete data was analyzed by the SPSS 26.0 version.

## **RESULTS:**

A total of 377 participants, primarily male (70.3%) compared to female (29.7%) with a mean age of  $21.5 \pm 3.5$  years, were included. The majority were unmarried (90.2%), from various academic years, and represented different socioeconomic statuses. Using the Athens Insomnia Scale (AIS), the study found that 52.8% of participants reported experiencing insomnia, with a higher prevalence among males (35.5%) compared to females (17.3%).

## **CONCLUSION:**

The study concluded that the high stress levels and late-night studying required getting good marks had a significant impact on insomnia among nursing students. With increasing age, its frequency was seen. Additionally, it might be decreased to complete sleeping hours (8–10) at night.

## **KEYWORDS:**

Nursing students, Insomnia, AIS scale.

# **EXPLORING CHALLENGES FACED BY DUAL-CAREER COUPLES AMONG NURSES IN PESHAWAR, PAKISTAN: A QUALITATIVE-DESCRIPTIVE STUDY**

**Saad Mujahid Khan**, Kamran Ullah, Abid Ur Rahman, Shaheer Ahmad, Farzana Wali, and Irum Jabeen.  
Rufaidah Nursing College, Peshawar

## **INTRODUCTION:**

The prevalence of dual-career couples balancing professional pursuits and family responsibilities is rising globally. In Peshawar, Pakistan, economic pressures have fuelled the growth of dual-career nurse couples. This study explores the challenges encountered by such couples in the nursing profession.

## **OBJECTIVE(S):**

1. To comprehend the challenges faced by dual-career nurse couples in Peshawar, focusing on family, personal, social, and work aspects.
2. To delve into the emotional and practical difficulties associated with managing dual nursing careers.

## **METHODOLOGY:**

Utilizing a qualitative design, the study focuses on dual-career nurse couples in Peshawar. Interviews were recorded through a recorder for data collection. The duration of the study was six months (July 2023 to December 2023) at prime foundation institutes and hospitals. Using a purposive sampling technique, we selected participants (tentatively 20 to 30 participants) meeting specific criteria, with ethical approval and informed consent obtained. Thematic analysis was chosen to analyze the data collected.

## **RESULTS:**

Findings reveal countless challenges for dual-career nurse couples in Peshawar, including balancing work and family, effective time management, and coping with emotional tolls from work-family conflicts. Gender-specific challenges emerge, with women often experiencing emotional stress and prioritizing family responsibilities.

## **CONCLUSION:**

Dual-career nurse couples in Peshawar grapple with significant challenges impacting their lives. Acknowledging these hurdles is vital for healthcare organizations, policymakers, and those in similar situations to provide support and strategies for improved work-life balance. This research enhances the understanding of dual-career couples in nursing, offering insights for interventions and policies to enhance nurses' well-being and job satisfaction.

## **KEYWORDS:**

Dual-Career Couples, Nursing Profession, Work-Life Balance, Economic Pressures, Emotional Stress.

## **C-SECTION RATE AND ITS MOST COMMON INDICATION - A SINGLE-CENTERED STUDY IN HMC**

**Faryal Afridi**, Mahnoor Khan  
Khyber Girls Medical College, Peshawar

### **INTRODUCTION:**

Caesarean section is a surgical birth method performed to deliver the foetus and membranes through the abdominal wall. According to WHO the globally recommended rate of caesarean section is 10-15% however nationally, the rate has climbed from 3.2% in 1990 to 20% in 2018.

### **OBJECTIVE(S):**

1. To find out the rate and most common indication of caesarean section at HMC, Peshawar.

### **METHODOLOGY:**

A descriptive study was conducted at Hayatabad Medical Complex, Peshawar. This study took place over the course of 2 months from January 2022 to February 2022. About 3064 patients were presented to the gynae ward out of which 731 deliveries were by Caesarean section. Data for it was evaluated from medical records of gynae A, B, and C using a questionnaire that was adopted from earlier research. Data was analysed using SPSS version 2020 and data was displayed in charts and graphs.

### **RESULTS:**

According to the study 3064 patients presented to HMC during these two months out of which 731 deliveries were by caesarean section. The rate calculated was 23.86% of which 73.86% were emergency cases while only 26.4% of caesarean done were preplanned. 72.9% of women were multigravid only 32.3% were nullipara. The commonest indication for caesarean section was previous caesarean section i.e. 33% followed by malpresentation 17% and foetal distress 13.2%. Other maternal conditions involved were 11.1%.

### **CONCLUSION:**

The rate of caesarean section was higher than WHO guidelines, with the commonest indication of previous caesarean section. The majority of cases had multiple births and emergency c-sections. Hence it is advised to make awareness among mothers for complications of caesarean section.

### **KEYWORDS:**

Caesarean Section, C-Section Indications, C-Section Rate.

# **EFFECTS OF MINDFULNESS PRACTICES BY UNIVERSITY STUDENTS OF PESHAWAR AND ITS RELATIONSHIP WITH THEIR STRESS LEVELS AND ACADEMIC PERFORMANCE**

**Aimen Sajid**, Minal Ahmed, Sadaf Tanveer  
Peshawar Medical College

## **INTRODUCTION:**

The prevalence of excessive academic stress and extreme competition among students has been noted as crucial contributors to intensified stress, adversely affecting one's academic performance. Mindfulness practices have proved to be an effective approach for mitigating these challenges, reducing stress, and enhancing attentiveness. However, there has been no study related to its significance in university students of Peshawar.

## **OBJECTIVE(S):**

1. To examine the effect of mindfulness practices among the students, investigate the relationship between mindfulness practices and stress levels, and find an interrelation between mindfulness and academic achievements.

## **METHODS:**

This correlational study design surveyed a sample ( $n=342$  with 36.8% male and 63.2% female) of university students in Peshawar aged 18-25 through online forums and questionnaires. Variables assessed included Mindfulness, Stress levels, and academic performance. The data analysis was done by using SPSS Statistics (v25).

## **RESULTS:**

Mean measurements for mindfulness were  $M= 58.2$ ,  $SD= 13.45$ , for Stress was  $M= 23.4$ ,  $SD= 5.5$  with  $P= 0.05$ , and for academic performance was  $M= 24.99$ ,  $SD= 7.03$ . Frequency of good to high academic performance is 52.33% and moderate to high stress is 97.07% in university students. Mean values indicate that the results were significant. Correlation between mindfulness and stress, ( $r= -0.12$ ,  $P<0.05$ ) shows a negative correlation, and academic performance and stress ( $r= 0.69$ ,  $P<0.05$ ) shows a positive correlation.

## **CONCLUSIONS:**

The study supports the hypothesis that mindfulness practices can reduce stress levels, positively influencing academic performance. Implementing these practices in universities is recommended to create a supportive learning environment conducive to mental health and academic success.

## **KEYWORDS:**

Mindfulness, Academic Performance, Stress, Psychological.



# **EMPOWERING PINK MINDS: UNVEILING BREAST HEALTH AWARENESS AMONG PAKISTANI UNIVERSITY STUDENTS**

**Omema Sarwar**, Kashaf Fatima, Laiba Tanveer, Malaika Farhan, Dr. Iqra Haider, Dr. Zufi Shad  
Hamdard University

## **INTRODUCTION:**

The global rise in breast cancer cases, including in Pakistan, highlights the critical need for increased awareness and early detection. This study focuses on evaluating breast cancer awareness among Pakistani university students, exploring factors like cultural beliefs and limited information access hindering effective education.

## **OBJECTIVE(S):**

The primary goal is to assess breast cancer awareness levels among four hundred and thirty female students in Karachi. Cultural beliefs, social stigma, and information accessibility are identified as barriers to breast health education.

## **METHODOLOGY:**

The research involved online questionnaires completed by participants, and data analysis was performed using IBM SPSS Statistics. The study examined awareness levels, frequency of Breast Self-Examinations (BSE), factors influencing knowledge, participation in awareness efforts, and the correlation between regular exercise and breast cancer prevention.

## **RESULTS:**

While 89% of respondents were aware of "breast cancer," a low percentage practiced routine BSE. This highlights the need for targeted educational initiatives to emphasize early diagnosis. A gap exists between knowledge and active involvement in breast cancer awareness, with a low likelihood of regular exercise indicating an opportunity for interventions promoting lifestyle choices in prevention.

## **CONCLUSION:**

The study emphasizes the importance of cultivating a proactive and knowledgeable culture around breast health among Pakistani university students. Early detection, prevention, and improved outcomes in the fight against breast cancer can be achieved by fostering awareness and proactive measures in Pakistan and beyond.

## **KEYWORDS:**

Breast Cancer, Awareness, Early Detection, Prevention.

# **EXPLORING THE NEURODEVELOPMENTAL TRAJECTORIES AND THERAPEUTIC APPROACHES IN AUTISM SPECTRUM DISORDER (ASD)**

**Areeba Moin**, Dua Nisar, Hafsa Ayaz  
Hamdard University, Karachi

## **INTRODUCTION:**

This research work delves into the intricate realm of autism spectrum disorder (ASD), a sophisticated neurodevelopmental condition characterized by persistent challenges in social communication and interaction, along with distinct patterns of restricted and repetitive behaviors.

## **OBJECTIVE(S):**

1. To analyze the recent scientific findings and diverse research approaches, the understanding of which is deemed critical for developing targeted interventions and personalized treatments, ultimately enhancing the quality of life for individuals on the autism spectrum.

## **METHODOLOGY:**

This is a review-based observational descriptive study focusing on the last 20 years. The sampling technique involves a systematic search and retrieval of articles from major academic databases, which include Google Scholar, Cochrane Library, PubMed, NIH, and Science Direct Engines. The study encompasses a global perspective, utilizing data from diverse geographical locations.

## **RESULTS:**

The study's findings highlight ASD's genetic complexities, emphasizing advances in genomics and identifying potential risk genes. It underscores Applied Behavior Analysis (ABA) as the preferred intervention, providing a comprehensive review of ABA approaches and their demonstrated efficacy in improving communication, social skills, and behavior management in children with ASD.

## **CONCLUSION:**

The conclusion emphasizes implications and highlights the roles of genetic and environmental factors, as well as abnormalities in brain connectivity and neural circuitry in ASD development.

## **KEYWORDS:**

Autism Spectrum Disorder, Neurodevelopmental Trajectories.

# RELATIONSHIP BETWEEN MATERIALISTIC INSTAGRAM REELS AND PSYCHOLOGICAL DISTRESS

Omema Sarwar, Hafsa Ayaz, Kashaf Fatima  
Hamdard University, Karachi

## INTRODUCTION:

With the increasing popularity of social media platforms like Instagram, there is a growing concern about the impact of materialistic content on individuals' psychological well-being.

## OBJECTIVE(S):

1. To investigate the correlation between exposure to materialistic Instagram reels and psychological distress among users.

## METHODOLOGY:

In September 2023, we conducted a survey-based research study to explore potential correlations between exposure to materialistic Instagram Reels and psychological distress. Using a random sampling technique, we gathered data from 266 university students aged 18-30 through an online questionnaire. Our analysis involved both statistical examination of quantitative data and thematic coding of qualitative insights to gain a comprehensive understanding of participants' experiences.

## RESULTS:

The study reveals a substantial correlation ( $p < .001$ ) between frequent interaction (34.2%) with materialistic Instagram loops and increased psychological stress, which manifests as trouble sleeping, anxiety, and aggressive behavior. These results highlight the pervasive impact of materialistic content on the psychological health of young adults, highlighting a statistically significant correlation with higher levels of discomfort across a range of social media measures.

## CONCLUSION:

Ultimately, the goal of this research is to foster a more thoughtful and compassionate digital community by better understanding the evolving relationship between social media content and mental health.

## KEYWORDS:

Social Media, Materialism, Psychological Well-being, Mental Health, Digital Community.

# IMPOSTER SYNDROME AMONG MEDICAL STUDENTS: A MYTH OR REALITY

**Khurram Manzoor**

Rahbar Medical and Dental College, Lahore

## **INTRODUCTION:**

Students suffering from imposter syndrome consider themselves less competent, and skillful as compared to the abilities they possess. Although previous research has identified different causes of stress and burnout, less research has been conducted to determine the frequency of imposter syndrome among Medical undergraduate students.

## **OBJECTIVE(S):**

1. To determine the frequency of imposter syndrome among medical students.
2. To find out the association of gender with imposter syndrome.

## **METHODOLOGY:**

A cross-sectional study was conducted on the first and second-year MBBS students of Shalamar Medical and Dental College, Lahore. A convenient sampling technique was used and 140 students participated in the research. The study tool is a validated questionnaire (Clance IP Scale) containing 20 items with a 5-point Likert scale. By adding up the score, the degree of severity is determined. Frequencies & and percentages were determined, and student t-test and A-nova were applied.

## **RESULTS:**

The frequency of imposter syndrome is 53.3% among Medical Students. The majority (85%) of the medical students had frequent to intense imposter feelings. A higher number of Female students were affected by the imposter phenomenon as compared to males. A greater number of first-year students were suffering from imposter syndrome as compared to second-year students.

## **CONCLUSION:**

There is a high frequency of imposter syndrome among medical students. The degree of severity ranges from moderate to frequent imposter experiences and female students are affected more as compared to their male counterparts.

## **KEYWORDS:**

Medical Students, Imposter, Likert Scale.

# FACTORS ASSOCIATED WITH DENGUE IN PESHAWAR IN 2022. A CASE-CONTROL STUDY

**Jalwa Khan,** Waleed Ahmad, Ahsan Alvi, Fayyaz Shah, Mursaleen Ahmad  
Kabir Medical College, Peshawar

## INTRODUCTION:

Dengue is an arboviral disease caused by infection from any of four dengue virus serotypes (DENV-1 to DENV-4). It is a major public health problem. The number of reported dengue cases was remarkably higher in 2022 as compared to the previous four years. This was fueled by the worst flooding that began in June.

## OBJECTIVE(S):

1. To identify the socioeconomic risk factors associated with dengue to provide an early diagnosis and preventive therapy.

## METHODOLOGY:

A case-control study was conducted in the tertiary-care hospitals in Peshawar in 2022. 89 cases and 181 controls participated. Both groups were interviewed and their response was recorded in the questionnaire. Socioeconomic risk factors: type of transport, collected water near residence, use of mosquito nets, covering of containers, use of AC were inquired. The sampling technique used for the case group is convenience sampling. Data analysis was done through SPSS version 26.

## RESULTS:

Of the 270 patients, 89 (32.96%) were clinically diagnosed with dengue of which, 54 (60.7%) were male and 35 (39.3%) were female. Urban location ( $P = 0.014$ ), presence of dengue patients within the neighborhood ( $P < 0.001$ ), outdoor activities ( $P = 0.006$ ) traveling in a car ( $P = 0.034$ ), presence of swampy water near residence ( $P = 0.005$ ) and poor sewage system ( $P = 0.014$ ) were associated with dengue.

## CONCLUSION:

Dengue awareness, a cleaner environment, and effective preventive measures for the risk factors may be promising in dengue prevention.

## KEYWORDS:

Dengue, Transportation, Urban Area, Collected Water, Mosquito Nets.

# ASSESSING KNOWLEDGE AND IDENTIFYING LIMITING FACTORS OF REGULAR MEDICAL CHECKUPS AMONG MEDICAL STUDENTS

Junaid Ali, Samad Khan, Mariya Azam Khattak  
Peshawar Medical College, Peshawar

## INTRODUCTION:

Regular medical checkup (RMC) is a preventive healthcare measure that evaluates health status and prevents potential diseases. It provides age and occupation-specific tests for undergraduate medical students, who may suffer from chronic non-communicable diseases like hypertension.

## OBJECTIVE(S):

1. To determine awareness of RMC among undergraduate medical students.
2. To evaluate reasons for not practicing RMC

## METHODOLOGY:

A cross-sectional study used structured questionnaires to collect data from 384 students at Peshawar Medical College. Random sampling technique was used. The study lasted from August to November 2023. Data was analysed using Chi square test, One way ANOVA and Independent samples T-test on SPSS-27.

## RESULTS:

Of the 384 students, 212 (55.2%) were males and 172 (44.8%) were females. Mean awareness score was recorded as 16.6 out of 19 and 63.5% scoring above 85%. However, only 11.7% of the students had attended RMC, mainly due to the perception of having no disease (19.6%). The most preferred component of RMC was general physical examination (10.9%). Hometown of the students had a significant relationship with RMC attendance ( $p = 0.05$ ). Mean awareness scores differed by gender, with males scoring 16.4 and females scoring 17.0 ( $p = 0.01$ ). Fourth-year students had the highest awareness at 17.2, followed by third-year students at 17.1 ( $p = 0.006$ ).

## CONCLUSION:

The study revealed a gap between the knowledge and practice of RMC among undergraduate medical students. There is a need for targeted interventions to address the barriers and promote the benefits of RMC.

## KEYWORDS:

Regular Medical Checkups, Non-Communicable Diseases, Preventive Healthcare, Awareness.

# **WOMEN CARDIAC PATIENTS' PERCEIVED BARRIERS AND FACILITATORS TO CARDIAC REHABILITATION: A QUALITATIVE DESCRIPTIVE STUDY**

**Ahmed Shehzad**, Maaz Karam Khan, Umer Rasheed, Balqis Akhtar, Imrana Rani, Nazia and Sakina  
Rufaidah Nursing College, Peshawar

## **INTRODUCTION:**

The study examines the unique perspective of women regarding barriers and facilitators to participating in cardiac rehabilitation programs. Cardiac rehabilitation is a managed program that includes: Exercise, Information on healthy living, such as how to eat well, take prescribed medication, and stop smoking, and counselling to develop methods of stress relief and mental health improvement.

## **OBJECTIVE(S):**

1. To explore women cardiac patients' perceived barriers and facilitators to cardiac rehabilitation.

## **METHODOLOGY:**

The qualitative descriptive study was conducted from April 2023 to October 2023 at public and private tertiary care hospitals of Peshawar, using semi-structured interviews, and purposive sampling techniques of data saturated on sample size, 30. Six steps of modified thematic analysis of Braun and Clark's by Sage (2022) were employed to generate codes, subthemes, and themes, consequently, an experience written in the form of words. Applied reflexive thematic analysis to recognize repetitive codes, subthemes, and themes. Pilot testing was carried out by multiple coders to ensure consistency, trustworthiness, and accuracy.

## **RESULTS:**

The researchers conducted semi-structured interviews with 30 women while participating in a cardiac rehabilitation program with an age range from 35 to 76 years and a mean age of 55 years. All were Muslim, Pashtun, and married. Only one participant was educated up to matric and was doing a job as a teacher in a private primary school. Three major themes include challenges, overcoming the challenges, and patient and healthcare provider relationships. However, our findings further suggested further research.

## **CONCLUSION:**

The study underscores the complex and multifaceted barriers such as psychological, emotional, social, and financial issues perceived by the women while participating in cardiac rehabilitation programs.

## **KEYWORDS:**

Cardiac Patients, Barriers, Cardiac Rehabilitation Program

# **FREQUENCY OF SELF-MEDICATION WITH PROPRANOLOL AMONG THE UNDERGRADUATE MEDICAL STUDENTS OF DISTRICT PESHAWAR**

**Ahmad Shah Abdali**, Muhammad Shahab, Muhammad Rizwan, Abdullah Yousaf Orakzai, Hazrat Junaid, Ajmal Khan, Shaheryar Khan  
Peshawar Medical College

## **INTRODUCTION:**

The prevalence of Self-medication among students is high worldwide. Medical Students are also involved in the malpractice of self-medication with propranolol due to higher levels of mental stress.

## **OBJECTIVE(S):**

1. To find out the frequency and evaluate the major causes of Self-medication with Propranolol among the undergraduate medical students of District Peshawar.

## **METHODOLOGY:**

A descriptive cross-sectional study was conducted on undergraduate medical students of Peshawar from June to September 2023. A total of 379 students were part of the study. The data was collected through a pre-validated questionnaire and was analyzed on SPSS version 26.

## **RESULTS:**

Of the total 379 students, 208 (54.9 %) were male while 171 (45.1 %) were female. 139 (36.7%) of the total were taking Propranolol of which 66 (47.5%) were male and 73 (52.5%) were female. 64 (16.9%), 40 (10.6%), and 23 (6.1%) were prescribed by physicians, themselves, and friends respectively. Among all of these individuals, 94 (67.6%) were taking propranolol for anxiety relief, 24 (17.3%) for performance enhancement, and 8 (5.6%) for peer pressure. 40(28.8%) individuals were using propranolol for anxiety other than study, 34 (24.5%) before written exams, 28 (20.1%) during exam study duration, 15 (10.8%) before OSPE and 12(8.6%) before presentations. 123 (88.5%) individuals thought that propranolol improves their performance. 93 (66.9%) have recommended to classmates, 81(58.3%) have offered to classmate and 85(61.2%) will recommend propranolol to others.

## **CONCLUSION:**

Propranolol intake is frequent in females, for anxiety relief and threat to society due to high recommendation value.

## **KEYWORDS:**

Propranolol, Self-medication, Medical Students.



# EVALUATING THE LEVEL OF KNOWLEDGE, ATTITUDE AND WILLINGNESS TOWARDS THALASSEMIA PRE-MARITAL SCREENING AMONG ADULTS

Mohammad Danial  
Peshawar Medical College

## INTRODUCTION:

Thalassemia is a collection of autosomal recessive genetic disorders where the production of hemoglobin is reduced due to faulty synthesis of alpha and beta chains, destroying red blood cells. The prevalence of the  $\beta$ -thalassemia gene in Pakistan is estimated to be between 5% and 8%. Pre-marital carrier screening involves the identification of defective genes responsible for genetic diseases.

## OBJECTIVE(S):

1. To assess the awareness and attitude of the population of Peshawar regarding premarital screening for thalassemia.

## METHODOLOGY:

A cross-sectional study was conducted among the population (above the age of 20) of Peshawar from June 2023 to January 2024. The sample size was 438 and simple random sampling was used. A close-ended questionnaire was used having a 3-point Likert scale ranging from "Agree-Disagree-Don't Know" and was distributed both online and in person. Statistical analysis was done using SPSS version 25.

## RESULTS:

The findings showed that out of 438 people, 294 (67.1%) people had sufficient knowledge about thalassemia while 144 (32.9%) people didn't. 250 (57.1%) people had awareness about thalassemia pre-marital screening, while 188 (42.9%) people had no idea. According to 290 (66.2%), people pre-marital screening plays a role in preventing thalassemia while, 148 (33.8%) people were unaware. Out of a total of 438 people, only 59 (13.5%) people underwent pre-marital screening while, 379 (86.5%) people did not. 151 (34.5%) people knew about the law that pre-marital screening is mandatory before marriage however, 287 (65.5%) people did not know.

## CONCLUSION:

Even though people had knowledge of thalassemia and understood the significance of pre-marital screening, only a minority opted to undergo the screening process.

## KEYWORDS:

Pre-marital screening, Thalassemia, Awareness.

# **A COMPREHENSIVE ASSESSMENT OF MUSCULOSKELETAL HEALTH AND ERGONOMIC PRACTICES: A CROSS-SECTIONAL STUDY AMONG DENTAL STUDENTS**

**Abdul Moiz Alizai**, Adeena Maryyum, Aliza Sajjad, Adeena Tariq Lari, Attia Batool  
Ayub Medical College, Peshawar Dental College, Dow University of Health Sciences, Foundation  
University of Clinical Dentistry

## **INTRODUCTION:**

Ergonomics is the science dedicated to achieving optimal human body positioning, enhancing comfort, and minimizing the risk of injuries. In dental students, poor posture and a lack of awareness regarding ergonomics significantly contribute to an increased risk of musculoskeletal disorders (MSDs).

## **OBJECTIVE(S):**

1. To determine the prevalence of MSD pains among dental students.
2. To evaluate the level of knowledge about ergonomics among the surveyed students.
3. To assess the posture of dental students, examining adherence to ergonomic principles.

## **METHODOLOGY:**

The study design employed for this research is a cross-sectional study conducted from July 2023 to August 2023. The study encompassed dental students in clinical years and house officers presently enrolled in dental colleges in Pakistan. The determined sample size was approximately 12,000, and utilizing Raosoft software, it was calculated to be 358. Convenient sampling was employed as the sampling technique. Data collection involved disseminating a questionnaire via Google Forms to eligible participants. For data analysis, SPSS Version 20 was utilized.

## **RESULTS:**

Out of the total 358 participants, 76.3% suffered from MSD pain, out of which the most prevalent was headache (54.7%) followed by lower back pain (53.1%), neck pain (52.8%), and shoulder pain (46.4%). Only 12% of the participants had enough ergonomics knowledge and only 22% were found to keep a good posture during their work.

## **CONCLUSION:**

In conclusion, the study reveals a heightened prevalence of musculoskeletal disorder (MSD) pains among dental students. Notably, the findings underscore a deficiency in knowledge and the manifestation of suboptimal postural practices during dental procedures among the surveyed students.

## **KEYWORDS:**

Ergonomics, Musculoskeletal Disorders, Neck Pain.

# IMPACTS OF PRE-COUNSELLING AND PSYCHOLOGY BEFORE SURGERY

Asia Noor ul Islam Khan, Muhammad Shahbaz, Tayyab Orakzai  
Bannu Medical College

## INTRODUCTION:

Pre-counseling and psychology before surgery must generally be considered an essential part of the surgical process. Counseling negates many fears a patient might have regarding the procedure and brings them at ease. Counseling also creates a trust bond between the patient and his/her doctor increasing the likelihood of the success of the procedure.

## OBJECTIVE(S):

1. To seek the incidence of counseling before surgery by a patient's doctor.
2. To evaluate the impact of counseling on patient's health post-operation.

## METHODOLOGY:

A descriptive cross-sectional study was carried out in Khalifa Gul Nawaz Teaching Hospital, Bannu from May 2023 to January 2024 among 80 patients of all genders and ages (16-75 years). A closed-end questionnaire was used for data collection and the assistance of a professional psychiatrist was also taken. The results were analyzed through SPSS version 26.

## RESULTS:

Among 80 patients (65.1% females, 34.9% males) 56.25% of the patients found counseling to be helpful, 31.25% found it to be neutral, and 12.5% found it to be unhelpful. Concerns of patients were analyzed and it was observed that 15% had a fear of post-operative complications. 13.75% were afraid of death, 12.5% had a fear of losing family, while another 12.5% had no fear at all. 1.25% had pregnancy complications, while 2.5% had a fear of the afterlife. When procedures were estimated, 21.25% required emotional support. 17.5% required various relaxation techniques. 16.25% required mental support. 11.25% required spiritual support

## CONCLUSION:

The majority of the patients found pre-counseling before surgery very important. It was seen that anxiety levels of patients not having undergone counseling ranged in anxiety from levels 5 to 8 on the anxiety estimation scale. About 10.25% of subjects were seen to be taking medications for coping with anxiety.

## KEYWORDS:

Counselling, Anxiety, Coping Strategies.

# **A CROSS-SECTIONAL STUDY ON KNOWLEDGE AND HEALTH PROBLEMS RELATED TO VITAMIN D DEFICIENCY AMONG UNIVERSITY STUDENTS OF PESHAWAR**

**Hajra, Nida Jilani, Alaila Anwar**  
Peshawar Medical College

## **INTRODUCTION:**

Vitamin D is the “sunshine vitamin”. Its deficiency affects body functions, bone health, calcium metabolism, and bone growth. Deficiency of vitamin D is a global health problem in both adults and children and is considered a global epidemic. It is essential to investigate the knowledge regarding vitamin D which play an important role in establishing healthy behaviors that contribute to the difference in vitamin D status.

## **OBJECTIVES:**

1. To determine and compare the level of knowledge related to vitamin D deficiency in undergraduate university and medical students.

## **METHODOLOGY:**

A cross-sectional study was conducted amongst undergraduate university and medical students of Peshawar, from November 2023 to January 2024. The sample size was 377 with a 95% confidence interval, 6% margin of error, and 50% response distribution. The research tool used was D-KAP-38, a validated questionnaire that consisted of questions of general knowledge, nutrition knowledge, attitude, and practice. Analysis was done through SPSS version 25. Descriptive statistics were computed through frequency, percentages, standard deviation and mean.

## **RESULTS:**

Among the 377 students, the response rate was 100%. The general knowledge of students was good (83%; n=313), nutritional knowledge was low (13%: n=49), attitude was average (49.6%: n=187) and practice was low (30.2%: n=114). The level of awareness among medical students was higher as compared to the university students.

## **CONCLUSION:**

The study concluded with good general knowledge. However, nutritional knowledge, attitude, and practice were average to poor.

## **KEYWORDS:**

Knowledge, Vitamin D, Rickets, Osteomalacia, Medical Students.

# **EXPLORING BREAST CANCER SCREENING BEHAVIORS AMONG UNDERGRADUATE FEMALE STUDENTS IN PESHAWAR, PAKISTAN: A COMPARATIVE ANALYSIS OF MEDICAL AND NON-MEDICAL DISCIPLINES**

**Atifa Afridi, Aima Nasir**  
Northwest School of Medicine

## **INTRODUCTION:**

Breast cancer is a growing global health concern, impacting even developing nations like Pakistan. Timely detection is pivotal, relying heavily on awareness campaigns and screening practices.

## **OBJECTIVE(S):**

1. To Investigate the knowledge and breast cancer screening practices among undergraduate female students in Peshawar, Pakistan, including both medical and non-medical disciplines.

## **METHODOLOGY:**

A comprehensive comparative observational study was conducted between April and July 2023. The research involved 600 students (301 medical, and 299 non-medical) who were surveyed through a self-constructed questionnaire. The data analysis encompassed demographics, breast cancer awareness, screening behaviors, and future intentions, providing a holistic perspective.

## **RESULTS:**

Among 580 female students, 249 practiced various methods like breast self-examination, clinical examination and mammography, with 331 never undergoing screening (P-Value = 0.017). The mean initiation age was  $17.44 \pm 2.593$  years. Notably, 35.7% learned through social media, 35.3% through teachers, and 13.3% through mothers (P-Value = 0.033). In comparing medical and non-medical groups, 138 students practiced standing breast self-examination, with 81 from the non-medical group and 57 from the medical group (P-Value = 0.039). For future screening, 70.7% expressed their intent (P-Value = 0.000).

## **CONCLUSION:**

The study accentuates the dire need for improved breast cancer education among female students, emphasizing the paramount importance of early detection. Key recommendations encompass educational initiatives within schools, hands-on self-examination workshops, and promoting consultations with healthcare professionals.

## **KEYWORDS:**

Breast Cancer, Screening Practices, Early Detection of Cancer, Students, Undergraduate, Peshawar, Pakistan.

# COMPARING THE IMPACT OF WORKLOAD ON THE MENTAL HEALTH OF HOUSE OFFICERS AT PUBLIC AND PRIVATE HOSPITALS IN PESHAWAR

Aiman Zia, Zobia Ali, Fareeha Zubair, Rafia Imran, Hamayl Ishfaq, Maha Sajjad  
Peshawar Medical College, Peshawar

## INTRODUCTION:

A high workload can lead to burnout; a feeling of emotional exhaustion leading to inefficacy. Doctors, who are generally exposed to high social and emotional demands at work, eventually develop symptoms of burnout.

## OBJECTIVE(S):

1. To compare the impact of workload on the mental health of HOs at public and private hospitals of Peshawar.

## METHODOLOGY:

A descriptive cross-sectional study was conducted among the house officers at two public hospitals (KTH and HMC) and two private hospitals (Kuwait Teaching Hospital and NWSM) in Peshawar from October 2023 to February 2024. A random sampling technique was used to collect data from 201 participants using a structured questionnaire adopted from previous studies. SPSS v.25 was used to analyze the data and T-test was applied.

## RESULTS:

Among 164 participants, there was a significant difference in scores for public ( $M=30.6951$ ,  $SD=6.55591$ ) and private hospitals ( $M=28.7683$ ,  $SD=5.95725$ ),  $t(162)=1.97$  and  $p<0.05$ . There was a higher patient count per day in public (21-30), than in private hospitals (1-10). The number of 24-hour shifts per month in public hospitals (>5 shifts) was more than in private (0-5 shifts). There was a considerable difference between HOs of public hospitals (49%) who could concentrate less than usual on their daily tasks. Having said that, the strain felt by private sector HOs (27%) was less as compared to their public counterparts (42%).

## CONCLUSION:

This study concludes that there is more workload in public than the private hospitals which leads to its greater impact on the mental health of HOs in public hospitals.

## KEYWORDS:

Efficiency, Mental Health, Workload.

# **FREQUENCY OF COMMON BEHAVIORAL PROBLEMS IN CHILDREN WITH ASD IN AUTISM CENTERS IN PESHAWAR AND PARENTAL PERCEPTION OF CHILDREN WITH ASD ABOUT ITS AVAILABLE MANAGEMENT AND EFFECTIVENESS**

**Malak Amanullah Khan, Shayan Sharif, M Afaq Khan Yousafzai, Yasir Afridi**  
Peshawar Medical College, Peshawar

## **INTRODUCTION:**

Autism spectrum disorder (ASD) is a complex neurodevelopmental disorder characterized by repetitive behaviors and restricted interests, social impairments, and communication difficulties. Our study aims to address common behavioral problems and provide appropriate interventions to help autistic children reach their full potential.

## **OBJECTIVE(S):**

1. To determine the frequency of common behavioral problems in children with autism.
2. To explore Parental perception of autistic children about its available management and effectiveness.

## **METHODOLOGY:**

A mixed-method study was conducted on 100 Autistic children in Centers over 2 months. Random sampling was used for the quantitative portion, while purposive sampling was used for the qualitative portion. Parents of autistic children filled out a CBCL questionnaire (for 1.5-6 years) and participated in an in-depth interview consisting of 9 questions. The qualitative data was analyzed using NVivo 14, while the quantitative data was analyzed using MS Excel and SPSS 26.0.

## **RESULTS:**

This study on autistic children shows that the most prevalent behavioral issues were aggression (24%), attention problems (19%), withdrawal (16%), and somatic problems (15%). The majority of parents expressed satisfaction with the available resources for managing autism, and they reported improvements in their children's behavior through various therapies.

## **CONCLUSION:**

Autistic children commonly exhibit behavioral issues such as aggressiveness, attention problems, and withdrawal. Many parents have observed significant improvements in their children's behavior through early intervention

## **KEYWORDS:**

Autism Spectrum Disorder, Child, Parents, Therapies.

# TRANSFUSION STRESS, ANXIETY, AND DEPRESSION AMONG CARETAKERS OF BETA-THALASSEMIA PATIENTS IN THALASSEMIA CENTERS OF PESHAWAR

Syeda Areeba Tazeen, Fozia Noreen  
Peshawar Medical College, Peshawar

## INTRODUCTION:

Beta Thalassemia major is a long-life blood condition that runs in families. An estimated 270 million people worldwide are carriers and over 70,000 babies are born yearly.

## OBJECTIVES:

1. To measure gender-wise depression, anxiety, and stress among caretakers of beta Thalassemia patients.
2. To measure location-wise depression, anxiety, and stress among caretakers of beta Thalassemia.

## METHODOLOGY:

A descriptive study was conducted on 250 caretakers of Thalassemia patients from November –December 2023. The degree of depression, anxiety, and stress was assessed using Depression, Anxiety and Stress Scale (DASS-21). Data was analyzed by using SPSS version 24. Descriptive statistics were used on demographic variables.

## RESULTS:

Among the total population, the response rate came out to be 100%. The mean age of the participants was 36.04 years  $\pm$  10.10. The males were 93 (37.2%) however, 157 (62.8%) were females. The degree of extremely severe anxiety among the rural population was 61 (24.4%) while in urban it was 48 (19.2%). The degree of severe depression in the male population was 51 (20.4%) however, in females, it was 73 (29.2%). The degree of severe anxiety among the male population was 25 (10%) while in females the anxiety was 58 (23.2%). However, the location-wise p-value for anxiety was 0.447. While gender-wise p-values for depression, and anxiety were 0.889 and 0.921 respectively

## CONCLUSION:

Despite comparing Depression, Anxiety, and Stress levels among male & female caretakers of thalassemia patients in urban rural areas no statistically significant differences were found. This suggests that these psychological factors may affect both genders equally and are not influenced by urban or rural environments.

## KEYWORDS:

Depression, Anxiety, Stress, Caretakers, Beta Thalassemia.



# COMPARISON OF FREQUENCY OF GIT-RELATED HEALTH ISSUES BETWEEN DAY SCHOLAR AND HOSTELITE UNDERGRADUATE STUDENTS IN RELATION TO DIET, EXERCISE AND SMOKING

Manahil Fayaz, Ayesha Ayub, Iqra, Noor ul Ain  
Peshawar Medical College, Peshawar

## INTRODUCTION:

Gastrointestinal (GI) health is an important marker of an individual's well-being, and it may be influenced by diet, exercise, smoking, and living conditions.

## OBJECTIVE(S):

1. To find out about diet, exercise, and smoking in day scholars and hostelites
2. To identify the difference in frequency (if present) of gastrointestinal health issues among day scholars and hostelites and examine potential associations with diet, exercise, and smoking.

## METHODOLOGY:

A comparative descriptive study was conducted on 385 undergraduate students from Peshawar from 20th November 2023 - 12th January 2024 using non-probability sampling. Data was collected through a short food frequency questionnaire (SFFFQ) and gastrointestinal symptoms rating scale (GSSR); and analyzed using SPSS version 15.

## RESULTS:

Study participants were 210 hostelites and 175-day scholars. Among both day scholars and hostelites, the majority had none to minimal GI issues ( $n=89$ , 42.4%), ( $n=78$ , 44.5%). Among both day scholars and hostelites, the majority had a dietary quality score (DQS) of 9 or above (82.4%,  $n=173$ ), (74.3%,  $n=130$ ). The mean value of DQS for day scholars and hostelites is 9.61 with an SD of 1.486 and 9.29 with an SD of 1.6048, respectively. The frequency of day scholars and hostelites that exercise was 61.0%,  $n=128$ , and 62.9%,  $n=110$  respectively. The frequency of smoking was 3.46% in hostelites and 6.7% in day scholars

## CONCLUSION:

It concluded that there's no significant difference in GI health issues between day scholars and hostelites although there's a significant difference in DQS of both groups, the frequency of smokers was comparatively higher in day scholars and exercise frequency was higher in hotelites.

## KEYWORDS:

Diet, Health, Students, Exercise, Smoking.

# **AWARENESS AND KNOWLEDGE OF NON-ALCOHOLIC FATTY LIVER DISEASE AMONG THE STUDENTS OF PESHAWAR MEDICAL COLLEGE**

**Noor-UI-Ain**, Umaima Arif  
Peshawar Medical College, Peshawar

## **INTRODUCTION:**

Non-alcoholic fatty liver disease (NAFLD) is a medical condition that is characterized by the fat content in the liver.

## **OBJECTIVE(S):**

1. To analyze the knowledge of medical students about NAFLD and to compare the level of awareness amongst the students of clinical and basic sciences.

## **METHODOLOGY:**

A cross-sectional study with a sample size of 384 was done at Peshawar Medical College from May 2023 to September 2023. A convenient sampling technique was used. A self-determined and pre-tested valid questionnaire was opted for. Data analysis was done using SPSS version 26. The chi-square test was exercised with a level of 0.05 level of significance to determine the significance of differences between aware and unaware students.

## **RESULTS:**

A total of 384 students participated in a survey conducted upon NAFLD. Out of the total, 129 males (48.8%) and 255 (52.6%) females who participated were aware of NAFLD. There were significant differences between gender, age, and class of study regarding level of awareness ( $p=0.0$ ). The mean score of the student's awareness was 18.0 (std=9.086). The level of awareness and knowledge improved with the higher level of study in college.

## **CONCLUSION:**

There was adequate awareness of NAFLD among the final-year MBBS students at Peshawar Medical College.

## **KEYWORDS:**

Non-Alcoholic Fatty Liver Disease, Awareness.

# **COMPARATIVE STUDY OF SELF-ESTEEM, STRESS, ANXIETY, HYPERTENSION, AND DEPRESSION AMONG DRUG ADDICTS AND NON-DRUG ADDICTS IN PESHAWAR, KPK, PAKISTAN**

Hassan Azeem, Hasham Khan, Mohammad Gul, Mudassir Khan, Mudassir Wali  
Peshawar Medical College

## **INTRODUCTION:**

Drug addiction is a chronic disease characterized by drug seeking and use that is compulsive, despite harmful consequences. Drug addiction increases physical and psycho-social problems.

## **OBJECTIVE(S):**

1. To determine the relation between Self-esteem, DASS, between drug addicts and non-drug addicts.
2. To determine the relation of BP level between drug addicts and non-drug addicts and their comparison with DASS and Self-esteem.

## **METHODOLOGY:**

It was a cross-sectional study. 300 subjects were randomly selected from Dost Welfare Foundation and data was collected using DASS-21 and Rosenberg Self-esteem questionnaire in 3 months (from 5th August 2023 to 31st October 2023). Data was analyzed by applying the Chi-square test, using SPSS-26. Blood pressure was measured with a blood pressure apparatus.

## **RESULTS:**

The statistics of DASS in Drug addicts was ( $M=37.2$ ),  $SD= 10.6$ , and Self-esteem was  $M=1.9$ ,  $SD =3.8$ . whereas, the BP was found 20% (severe) and 40% (normal) in drug addicts. The DASS mean for non-drug addicts was  $M= 17.0$ ,  $SD=11.2$ , and Self-esteem was  $M=21.9$   $SD = 3.6$ . The BP was found 3.3% (severe) and 53.3% (normal) in non-drug addicts. The chi-square for drug addicts was significant,  $\chi^2 (1, N = 150) = .91$ ,  $p = .01$  and for non-drug addicts was  $\chi^2 (1, N = 150) = .10$ ,  $p = .01$ .

## **CONCLUSION:**

Depression and stress anxiety were found high and self-esteem was low in drug addicts, the DASS was low and self-esteem was high in non-drug addicts. The BP was normal in non-drug addicts and it was severe in drug addicts. The drug addicts' psychological and physical conditions were highly affected by addiction.

## **KEYWORDS:**

Drug Addicts, Depression, Stress and Anxiety (Dass), Self-Esteem, Blood Pressure.

# **ASSESSMENT OF KNOWLEDGE AND AWARENESS REGARDING CHILDHOOD AUTISM AMONG UNDERGRADUATE STUDENTS OF PESHAWAR MEDICAL COLLEGE**

**Maryam Fatima, Kashmala**  
Peshawar Medical College, Peshawar

## **INTRODUCTION:**

Autism is a neuro-developmental disorder with a genetic basis characterized by marked impairment in social interaction, verbal and non-verbal communication, repetitive behavior, and intellectual disabilities. Autism awareness among medical students and the general public is important to improve the quality of life of Autistic children.

## **OBJECTIVE(S):**

1. To determine the knowledge and awareness regarding childhood autism among undergraduate students of Peshawar Medical College.
2. To determine the awareness level among students of basic sciences and clinical batches of Peshawar Medical College.

## **METHODOLOGY:**

A descriptive cross-sectional study was conducted from July 2023 to October 2023 with a sample size of 385. Non-probability convenient sampling technique was used. Data was collected from undergraduate students of Peshawar Medical College by using a standardized questionnaire KCAHW. Descriptive statistics was used to determine the frequencies and percentages of the study variables by using SPSS version 26.

## **RESULT:**

Among the total participants, there were 197 males (50.5%) and 188 females (48.2%). The awareness level of overall MBBS students was M=10. The total score of awareness among basic sciences batches was M= 8.4 while that of clinical batches was M=11 which shows that third, fourth, and final-year students (Clinical batches) were more aware than first and second-year students (basic sciences batches) about childhood autism.

## **CONCLUSION:**

Our study concludes that clinical batches are more aware and have more knowledge than basic sciences batches. Awareness measures and workshops could be conducted to improve the awareness level in both basic sciences and clinical batches.

## **KEYWORDS:**

Childhood Autism, Undergraduate Medical Students, Awareness.

# QUALITY OF LIFE AND STRESS LEVELS IN CAREGIVERS OF PATIENTS OF SCHIZOPHRENIA IN DISTRICT PESHAWAR

**Sudais Anwar**, Abdullah Danish, Abdullah Haider, Muhammad Ismail, Zain Ul Abideen, Saad Shams  
Peshawar Medical College, Peshawar

## INTRODUCTION:

Schizophrenia, a complex and debilitating mental disorder, not only affects individuals but also casts a profound shadow on the lives of their caregivers. This research explores the QOL and perceived stress among caregivers.

## OBJECTIVE(S):

1. To assess the impact of stress on caregivers of schizophrenic patients.
2. To determine the QOL of caregivers of schizophrenic patients.

## METHODOLOGY:

A cross-sectional study was done from 1st October to 15th November 2023. The study sites were four tertiary care hospitals in Peshawar. Non-probability convenient sampling was done and the data was collected from 70 caregivers by using standardized questionnaires i.e. QOL questionnaire and PSQ. Data was analyzed by applying the Chi-square test by using SPSSV26.

## RESULTS:

In this research, the percentage of the male population was 71.4% while the female population was 28.6%. Most of the subjects were in the age group of 30-40. The mean score for QOL was 107, which shows a decrease in QOL in caregivers and the mean score for perceived stress was 75.31, which shows higher perceived stress. There is a negative correlation of QOL ( $r = -.10$ ) and a positive correlation of stress ( $r = .06$ ) among caregivers of schizophrenic patients.

## CONCLUSION:

Results supported the study's hypothesis, uncovering a meaningful relationship between QOL and stress in caregivers of patients with schizophrenia. This underscores the importance of intervention-driven mental health programs, aiming to enhance QOL and provide psychosocial support for stress reduction in caregivers.

## KEYWORDS:

Schizophrenia, Quality of Life, Perceived Stress, Caregivers.

# **BARRIERS TO MATERNAL HEALTH-CARE SERVICES UTILIZATION IN RURAL AREAS OF PESHAWAR**

**Zeeshan Ali**

Peshawar Medical College

## **INTRODUCTION:**

A significant burden on maternal and child healthcare services is evident in low-income countries. Despite the implementation of various maternal healthcare programs still, challenges are faced and high mortality rates with limited progress seen towards achieving the Millennium Development Goals.

## **OBJECTIVE(S):**

1. To Identify and evaluate the barriers to Maternal Child Health Service utilization.

## **METHODOLOGY:**

This descriptive interview-based study was conducted on 202 reproductive-aged married women of Peshawar from November 2023 to January 2024. Serial sampling technique used for data collection through structured questionnaire after ethical approval. Data was analyzed using SPSS Version-25. Descriptive analysis was done through frequency, percentages, mean, and standard deviation.

## **RESULTS:**

The mean age of the participants was 26.4 Years + 1.061. The women who faced challenges in accessing MCHS 70 (34.7%). The women supported by their families were 152 (75.2%), however those who faced resistance were 77 (38.1%). Of the women who had an active role in decision making 77 (38.1%), but 84 (41.6%) were the ones with neglected decisions. The women also faced financial constraints (n= 91; 45%), transportation issues (89; 44.1%), suffered from traditional beliefs (88; 43.6%), and felt afraid of unfamiliar clinics (120; 59.4%). The females not comfortable with male gynecologists were 114 (56.4%), and few had specific reasons for being uncomfortable with male gynecologists 100 (49.5%)

## **CONCLUSION:**

This study concluded barriers like resistance from family, no role in decision making, decisions neglected, male gynecologists, financial constraints and transportation issues as well as feeling afraid of unfamiliar environment.

## **KEYWORDS:**

Maternal Child Health Care Services, Barriers, Utilization, Decision Making, Rural.

# REFLECTIONS IN THE WHITE COAT: EATING DISORDERS, BODY IMAGE AND MENTAL HEALTH AMONG MEDICAL AND DENTAL STUDENTS OF PESHAWAR

Laiba Aurangzeb  
Peshawar Medical College

## INTRODUCTION:

Individuals with Eating Disorders usually display significant impairments in physical, psychological, and social functioning linked to body dissatisfaction.

## OBJECTIVE(S):

1. To Investigate the effect of eating disorders on body image.
2. To evaluate the mediating influence of mental health on eating patterns and body image.

## METHODOLOGY:

A cross-sectional study was conducted from October 2023 to February 2024 on 364 medical and dental students of Peshawar. Participants completed questionnaires comprising of Eating Attitude Test (EAT-26), Body Image Questionnaire (BIQ), and Hospital Anxiety and Depression Scale (HADS). Data was analyzed using SPSS v.25.

## RESULTS:

Among 364 participants, the mean age was  $21.26 \pm 1.37$  years. The majority were females ( $n=216, 59.3\%$ ), from clinical years ( $n=209, 57.4\%$ ), and private sector ( $n=339, 93.1\%$ ). The Cronbach's alpha reliability of the EAT was 0.917, BSQ 0.732, and HADS 0.722. More than half reported higher body dissatisfaction ( $n=188, 51.6\%$ ), a quarter reported eating disorders ( $n=299, 82.1\%$ ), the majority reported no depression ( $n=180, 49.5\%$ ) and only one-third reported Anxiety symptoms ( $n=133, 36.5\%$ ). Females have significantly more eating disorders ( $p=0.000$ ) with higher body dissatisfaction than males. Regression analysis suggested the dependent variable (HADS) mediates the relationship between the independent variables (EAT, BSQ) and outcome ( $p=0.000$ ). Significant positive correlation was observed between HADS, its subtypes with eating patterns and body image, while a significant negative correlation was found between body image and eating pattern ( $p=0.000$ ).

## CONCLUSION:

The study reveals high levels of body dissatisfaction and eating disorders among students, particularly in females. Recognizing mental health factors is crucial in addressing body image and eating behaviors.

## KEYWORDS:

Eating Disorder, Body Image, Mental Health, Medical Students.

# **FREQUENCY AND FEATURES OF SLEEP PARALYSIS AMONG MEDICAL AND DENTAL STUDENTS OF DISTRICT PESHAWAR**

**Karobi Farooq**, Shandana Israr, Aiman Khattak, Isbah Israr, Atika Israr, Sana Gul  
Peshawar Medical College

## **INTRODUCTION:**

Sleep paralysis is a period of inability to perform voluntary movements at the onset of sleep or upon awakening, it is a relatively common parasomnia often accompanied by varied clinical features and experiences. However, little is known about the range and relative severities of typical SP symptoms and accompanying hallucinations.

## **OBJECTIVE(S):**

1. To determine the frequency and features of students suffering from sleep paralysis in medical and dental students of district Peshawar.

## **METHODOLOGY:**

A questionnaire-based study was conducted from July to December 2023, among students of Peshawar Medical and Dental College, Rehman Dental College, Northwest School of Medicine, and Kabir Medical College. The data was collected from a total of 400 students. Descriptive statistics were used to determine the frequencies and percentages of the study variables. For determining the association between the study variables Chi-square test was conducted with a p-value of  $< 0.05$  as significant using SPSS 26.0.

## **RESULTS:**

49 out of 400 students reported experiencing sleep paralysis. The questions asked with their results are Lifetime experiences: 43%=2-4 episodes, 20% =5-20 episodes. Floating sensations: 35% =never, 34% =occasionally. Physical sensations: 27% =never, 26% =always. Sleep position: 37% =on back, 35% =on side. Time of experience: 61% =in the middle of the sleep period, 20% =when waking up. Suffering from other conditions: 49% =yes, 51% =no.

## **CONCLUSION:**

This study highlighted the frequency of sleep paralysis among medical students. Furthermore, it emphasizes the diverse expression of clinical features of this condition.

## **KEYWORDS:**

Sleep Paralysis, Parasomnia, Mood Disorder, Sleeping Position.



## **COMMUNITY-BASED FALL PREVENTION PROGRAM IN KARACHI**

**Shahid Khan, Simra Khan, Maha Zafar, Maria Moin.**  
Hamdard College of Rehabilitation and Allied Health Sciences

### **INTRODUCTION:**

Our program integrates various elements including education, exercises, modification, and community engagement to address both intrinsic and extrinsic risk factors for falls. By providing comprehensive education on fall prevention strategies and conducting risk assessments, our program empowers the Geriatric Community to make informed decisions about their safety and ensure their well-being.

### **OBJECTIVE(S):**

1. To prevent falling in the geriatric community.
2. To create awareness about walking aids and assisted devices.

### **METHODOLOGY:**

A cross-sectional prospective study was conducted and patients referred from OPD and our personally conducted Workshop and the included criteria were invited to participate in the study. Data was collected through a Questionnaire and a workshop over a period of one month.

### **RESULTS:**

Among 85 patients, 57 (67%) were female and 28 (33%) were male. Most of the patients were in the age range of 55-70, having the chief complaint of frequent falls, postural instability, etc. The majority (80%) of the patients were found to be untreated and unaware and the rest (20%) had basic knowledge.

### **CONCLUSION:**

In conclusion, our community-based fall prevention program offers a holistic and sustainable approach to addressing the complex nature of falls in the geriatric community. By integrating education, exercise, environmental modifications, and community involvement, this program plays a vital role in promoting safety, independence, and quality of life for the elderly. Ultimately contributing to a healthier and more resilient community.

### **KEYWORDS:**

Fall Prevention, Geriatric, Physiotherapy, Awareness, Rehabilitation.

# **ROLE OF PSYCHOLOGICAL WELL-BEING ON PERSONALITY OF UNDERGRADUATE MEDICAL AND DENTAL STUDENTS OF PESHAWAR: MEDIATING ROLE OF COPING STRATEGIES**

**Sara, Momina Mehmood, Ayesha Shah.**  
Peshawar Medical College, Peshawar

## **INTRODUCTION:**

Students are exposed to high levels of stress and anxiety, which can negatively impact their psychological well-being and specific personality traits.

## **OBJECTIVE(S):**

1. To Investigate the effect of psychological well-being and its relationship to coping strategies and personality, also determine the mediating role of coping strategies on personality and psychological well-being.

## **METHODOLOGY:**

A cross-sectional study was conducted from October 2023 to February 2024 on 364 students of Peshawar. Participants completed questionnaires comprising Brief Cope Inventory, Psychological Well-being, and Big Five Personality Inventory. Data were analyzed using SPSS v.25.

## **RESULTS:**

Among 364 participants, the mean age was  $21.79 \pm 1.81$  years, mostly females ( $n=206, 56.6\%$ ) in Pre-clinical years ( $n=237, 65.1\%$ ), and private sector ( $n=321, 88.2\%$ ). The majority were 2nd born ( $26.9\%$ ), had >4 siblings ( $26.1\%$ ), lived in nuclear families ( $59.6\%$ ), and belonged to middle socio-economic status ( $69.5\%$ ). Over half reported Lower psychological well-being ( $n=203, 53.8\%$ ), extraversion ( $n=197, 54.1\%$ ), and agreeableness personality traits ( $n=240, 65.9\%$ ). Students exhibited weak psychological strength, non-problem, and emotionally focused coping styles ( $n=246, 67.6\%$ ;  $n=310, 85.2\%$ ), using avoidant coping mechanisms ( $n=218, 59.9\%$ ). Regression analysis suggested the dependent variable (BRIEF COPE) mediates the relationship between the independent variable (Psychological well-being) and outcome ( $p=0.000$ ), except with Big Five personality traits ( $p<0.05$ ). Significant correlations were found between psychological well-being, brief coping, and Big Five inventory ( $p=0.000$ ), except for problem-focused coping and extraversion ( $p<0.05$ ).

## **CONCLUSION:**

The study concluded lower psychological well-being, along with lower levels of extraversion and agreeableness traits among students.

## **KEYWORDS:**

Psychological well-being, Big Five Personality inventory, Brief Cope.

# **ASSESSMENT OF KNOWLEDGE, ATTITUDE AND PRACTICES ABOUT NEEDLE HANDLING AND DISPOSAL AMONG THE PARAMEDICAL STAFF OF PRIVATE TERTIARY CARE HOSPITALS IN PESHAWAR**

**Ahmed Khan Khalil**, Shehryar, Muhammad Haris, Daniyal, Huzaifa, Haris Nisar, Muhammad Ali, Atiqullah, Naveed  
Peshawar Medical College

## **INTRODUCTION:**

For proper handling and disposal, guidelines have been formed and are most effective to prevent needle stick injury.

## **OBJECTIVE(S):**

1. Observe the handling and disposal techniques of paramedical staff.
2. Determine the knowledge of paramedical staff about needle handling and disposal.
3. Compare the knowledge with the practices of the paramedical staff.

## **METHODOLOGY:**

A cross-sectional study was conducted at Peshawar Medical College from 12<sup>th</sup> June 2023 to 2<sup>nd</sup> Nov 2023. The sample size came out to be 287 using Open Epi Info. A simple random sampling method was used and data was collected through a questionnaire and checklist. All the data was analyzed through SPSS version 19.

## **RESULTS:**

There were 95.3% had good mean knowledge, 85.2% had a positive attitude and 60.3% had a good mean practice score. As for skills about needle handling and disposal the significant steps which are of more concern are mentioned as follows. 77.7% did not wash or sterilize their hands, only 59.2% used a dedicated tray for preparation of injection, and 100% used a syringe taken from a sterile unopened packet. 29.6% changed the needle after withdrawing one dose, 25.1% used a pair of gloves, 78% recapped the used needle and 26.1% used a needle destroyer.

## **CONCLUSION:**

The study results showed that 95.3% of the paramedical staff has good mean knowledge, 85.2% has a positive attitude and 60.3% has a good mean practice score. From these results, we conclude that the mean practice score came out to be unsatisfactory and has significant space for improvement through different interventions.

## **KEYWORDS:**

Paramedics, Tertiary Healthcare.

# **FREQUENCY AND ASSOCIATION OF SEVERITY OF PREMENSTRUAL SYNDROME WITH ACADEMIC STRESS IN MEDICAL AND ENGINEERING UNDERGRADUATES**

**Mahnoor Shafiq**, Mahnoor Siddiqui, Maryam Ahmad  
Shalamar Medical and Dental College, Lahore

## **INTRODUCTION:**

Premenstrual syndrome is a set of recurrent behavioral, and psychological symptoms in the females of reproductive age, before menstruation.

## **OBJECTIVE(S):**

1. To determine the frequency and compare the severity of Premenstrual syndrome and academic stress in medical (MBBS) and engineering undergraduates.
2. To determine the association of severity of Premenstrual syndrome with academic stress in medical (MBBS) and engineering undergraduate students.

## **METHODOLOGY:**

A cross-sectional study was conducted at Shalamar Medical and Dental College, Lahore, and the University of Engineering and Technology, Lahore from May 2022 to October 2022. The American College of Obstetricians and Gynecologists (ACOG) criteria was used to assess the severity of Premenstrual syndrome and for Stress measurement Depression Anxiety Stress Scale (DASS 21) was used. 400 female students were included. Data was analyzed by using SPSS 26. The chi-square test and independent t-test were applied to determine the association of pre-menstrual syndrome with academic stress.

## **RESULTS:**

Seventy-three percent (134) of the female medical undergraduates had academic stress and sixty-eight percent (113) of the female engineering undergraduates had academic stress. 34.9% of the medical undergraduates had mild, 22% had moderate, and 37.2% had severe PMS symptoms while 39.8% of the engineering undergraduates had mild, 19% had and 30.8 % had severe PMS symptoms. There was a significant association between the severity of PMS and academic stress in female medical and engineering undergraduates ( $p=0.001$ ).

## **CONCLUSION:**

Those who faced academic stress had severe symptoms of PMS. Academic stress was higher in medical than engineering undergraduates.

## **KEYWORDS:**

Premenstrual Syndrome, Academic Stress, Medical and Engineering Undergraduates.

# **EVALUATION OF SUBJECTIVE ORAL SYMPTOMS, ORAL HYGIENE KNOWLEDGE, BEHAVIOUR, AND PRACTICES IN UNDERGRADUATE STUDENTS OF PESHAWAR MEDICAL COLLEGE**

**Aqsa Saud Zeb**, Braikhna  
Peshawar Dental College

## **INTRODUCTION:**

Medical students, being more exposed to underserved populations than dental students must have appropriate knowledge about oral health, but yet alone it's not enough. Proper adaptation of good oral health behaviors and practices is beneficial for themselves too for the prevention of subjective symptoms such as dental carries and periodontal diseases.

## **OBJECTIVE(S):**

1. To report subjective oral symptoms, oral hygiene knowledge, behavior, and practices in undergraduate students of Peshawar Medical College, by using a validated questionnaire.

## **METHODOLOGY:**

A 2-month long cross-sectional questionnaire-based study, conducted in Peshawar Medical College. Convenient sampling technique was used to select 300 undergraduate MBBS students from first to final year, any absent students for data collection or not willing to participate were excluded. SPSS version 25 was used for data analysis.

## **RESULTS:**

Amongst 300 undergraduate medical students (male=89, female=211) subjective oral symptoms were present in n=200(66.7%), good oral health behavior in n=170(56.7%), good knowledge about oral hygiene in n=159(53%), and good practices were found in n=90(30%) students. There was a statistically significant difference ( $p<0.05$ ) when class was compared with the oral hygiene knowledge of undergraduate medical students.

## **CONCLUSION:**

Within the limitations of this study, it can be concluded that; a lack of oral hygiene knowledge, behavior, and practices in undergraduate medical students results in subjective oral symptoms therefore they should be well-informed.

## **KEYWORDS:**

Oral Hygiene Knowledge, Behavior, Subjective Oral Symptoms

# PERCEPTION OF DRUG ADDICTS ABOUT DRUG REHABILITATION PROGRAM IN PESHAWAR

Hamza Farooq, Abdal Ahmed, Muhammad Waleed Farooq, Syed Ibad, Ayatullah  
Peshawar Medical College

## INTRODUCTION:

Drug addiction is a complex illness marked by uncontrollable craving and persistent drug use despite harmful consequences. It involves compulsive drug-taking and dysfunctional behaviors, disrupting normal life in family, work, and society.

## OBJECTIVE(S):

1. To find out the perception and main problems that drug addicts are facing during their rehabilitation phase and the main reasons behind their relapse after receiving treatment through qualitative interviews.

## METHODOLOGY:

This Qualitative exploratory study was conducted from October 2023 to February 2024 and included drug addicts of Peshawar. Interviews were taken from the drug addicts and transcripts underwent using 6 phases of thematic analysis. The Saldana guidelines were employed to conduct an inductive thematic analysis for coding the transcripts. A total of 12 drug addicts from Govt and private sector were interviewed and selected based on their stay in the rehabilitation centers for more than two weeks. The sample size was determined by reaching a 95% similarity in responses, at which point further interviews were ceased.

## RESULTS:

In the initial coding cycle, approximately 169 codes emerged, consolidated into 35 distinct categories, and finally, 5 themes emerged i.e. 1. Perceptual Insights of drug abuser regarding addiction and rehabilitation facilities. 2. Neurobiological and psycho-social barriers in addiction recovery. 3. Relapse precursors in post-rehabilitation settings. 4. Mitigating addiction in society: evidence-based strategies and policy recommendations and 5. Societal support for addiction: assessing needs and resources.

## CONCLUSION:

The rehabilitation services for drug addicts in Peshawar lack adequacy. Government-run drug rehabilitation centers often result in treatment failure and a high rate of relapse.

## KEYWORDS:

Drug addicts, Rehabilitation Centers, Relapse, Thematic Analysis

# THE PREVALENCE AND RISK FACTORS ASSOCIATED WITH SCIATICA IN DISTRICT PESHAWAR

**Mashood Sethi**, Muhammad Shahan, Ayesha Khalid  
Kabir Medical College, Peshawar

## INTRODUCTION:

Sciatica, a syndrome causing pain in the lumbosacral region, can extend to the lower limb, buttock, calf, knee, and leg. Cauda equina syndrome (CES) presents with low back pain or sciatica, potentially progressing to paraplegia. The primary cause is often a herniated lumbar disc. Risk factors include obesity, occupational workload, and certain physical activities. Prevalence varies widely, and recent studies suggest potential misinterpretation of lower back pain as sciatica. In Nowshera, research found a higher prevalence in females (58.7%) than males (41.3%). This study in Peshawar aims to determine sciatica prevalence and risk factors.

## OBJECTIVE(S):

1. To determine the prevalence and risk factors of sciatica among the population of Peshawar.

## METHODOLOGY:

A cross-sectional study was carried out among different hospitals in Peshawar, and the duration was 2-3 months a total of 200 patients were targeted from the neurosurgery, neurology, and physiotherapy wards of respective hospitals through purposive sampling. Data was analyzed through SPSS version 26.0.

## RESULTS:

Of the 200 sciatica patients, 109 (54.5) were females, and 91 (45.5) were males. The prevalence of sciatica was found to increase with heavy lifting, an inactive lifestyle, and traumatic spine injury. Unmarried patients were found to be at the highest risk of sciatica (104) Sciatica is more common among females as compared to males. Heavy lifting, physical inactivity, traumatic injury, obesity, and scoliosis are the major risk factors for sciatica.

## CONCLUSION:

Sciatica is more common among the female gender as compared to the male gender in the district of Peshawar. It is strongly associated with heavy lifting and physical inactivity.

## KEYWORDS:

Risk Factors, Sciatica, Prevalence

# **PREVALENCE OF BODY DYSMORPHIC DISORDER AMONG MEDICAL STUDENTS AND GENDER DISPARITIES**

**Muhammad Salman**, Muskan Ikram, Dua Samee, Sayed Hamza  
Kabir Medical College, Peshawar

## **INTRODUCTION:**

BDD is a psychological disorder characterized by an obsessive preoccupation with perceived defects or flaws in one's appearance. Medical students are at an increased risk of developing BDD, given their exposure to rigorous academic demands and the pressure to maintain high standards of physical appearance. The prevalence of BDD in the general population is estimated to be 1.9%.

## **OBJECTIVE(S):**

1. To determine the prevalence of body dysmorphic disorder (BDD) among medical students in Khyber Pakhtunkhwa and gender-based differences.

## **METHODOLOGY:**

A cross-sectional study was conducted in the medical colleges of Khyber Pakhtunkhwa, in which a total of 450 students participated using a convenient sampling technique. The data collection involved the administration of a standardized questionnaire to medical students. The data obtained was analysed using SPSS version 26.0.

## **RESULTS:**

The mean age was  $22 \pm 2.30$ . The prevalence of BDD among medical students was 49.6 with a higher prevalence among males. Facial features and hair were the predominant areas of concern, with 32.2% and 27.8%, respectively. The cross-tabulation of gender with specific body parts of concern. Notably, facial features and hair were more frequently cited concerns among females, while muscle build and height were more commonly mentioned by males.

## **CONCLUSION:**

The BDD is prevalent among medical students, particularly among males. The features and hair are the most common areas of concern.

## **KEYWORDS:**

Body Dysmorphic Disorder, Hair, Facial, Medical Students



# **FREQUENCY OF NIGHTTIME SNACKING AND ITS EFFECT ON QUALITY OF SLEEP OF MEDICAL STUDENTS**

**Anas Muiz Jehan, Ihsanullah Biland, Muhammad Sohail**  
Peshawar Medical College

## **INTRODUCTION:**

Fast food consumption has several side effects on our health, i.e. obesity and poor nutrition. In recent studies, it has been identified that soft drinks (carbonated drinks), and fast food show a strong association with anxiety-induced sleep. Reduced sleep is associated with increased obesity, which increases the prevalence of cardiovascular diseases and diabetes.

## **OBJECTIVE(S):**

1. To determine the frequency and timing of fast-food consumption among medical students.
2. To determine the association between the frequency of sleep disturbances related to fast-food ingestion among medical students.

## **METHODOLOGY:**

A descriptive, cross-sectional study was done on private college medical students in Peshawar District. The study lasted two months and was conducted using the probability convenient sampling method. The sample size was 400. Data was analyzed through SPSS by applying the chi-square test.

## **RESULT:**

The majority (70%) of students mentioned that their sleep is scheduled and they feel refreshed in the morning. The majority (75%) did not prefer to eat fast food, and only one quarter (25%) usually intake fast food at different (timings, number of intakes in a week, and duration before going to sleep). Of those who used to intake fast food; the majority (80%) of them did not have any problem falling asleep or remaining asleep. Only a few (20%) had sleeping problems that were unrelated to fast-food intake, as they were already unwilling to eat fast food.

## **CONCLUSION:**

No significant association was found between nighttime snacking and its adverse effects on sleep.

## **KEYWORDS:**

Fast-food, Sleep, Night-time Snacking

# **PREVALENCE OF IRRITABLE BOWEL SYNDROME AMONG MEDICAL STUDENTS OF KPK AND ITS ASSOCIATION WITH ANXIETY: AN ANALYTICAL CROSS-SECTIONAL STUDY**

**Muhammad Umair** (Bacha Khan Medical College), Farheen Fazal (Khyber Medical College), Shehzeena Rehman (Northwest School of Medicine)

## **INTRODUCTION:**

Irritable bowel syndrome (IBS) is a chronic gastrointestinal disorder marked by fluctuating bowel habits, abdominal discomfort, and bloating, unrelated to anatomical abnormalities. Stress often exacerbates IBS symptoms.

## **OBJECTIVE(S):**

1. To assess IBS prevalence and its association with anxiety among medical students.

## **METHODOLOGY:**

An analytical cross-sectional study in medical colleges of KP was conducted from May to September 2023, involving 270 participants selected via non-probability convince sampling. The Questionnaire comprised of Birmingham questionnaire and GAD7 scale. Spss-27 was used for data analysis.

## **RESULTS:**

Out of 270 students, 40% met ROME II criteria for IBS, with a higher prevalence in females (52.7%). The overall prevalence of severe anxiety was 19% according to GAD-7. Among those students diagnosed with IBS, 43% had severe anxiety. A significant association ( $P < 0.001$ ) between IBS and anxiety symptoms was observed.

## **CONCLUSION:**

This study highlights the under-diagnosis of IBS, a prevalent disorder exacerbated by stress, especially in medical students. The findings emphasize the need to screen IBS patients for anxiety and provide appropriate management.

## **KEYWORDS:**

Irritable bowel syndrome, abdominal discomfort, stress

# AN INSIGHT INTO SURGICAL PERFORMANCE ANXIETY AMONG DENTAL STUDENTS: IMPLICATIONS ON PATIENT CARE

Aiman Arshad, Dur e Adan Zia  
Peshawar Dental College, Peshawar

## INTRODUCTION:

Anxiety occurring in reaction to a perceived threat concerning the performance of a person taking a surgical task is considered surgical performance anxiety.

## OBJECTIVE(S):

1. To find the prevalence of surgical performance anxiety among dental students.
2. To find the perception of the students on the implications of their anxiety on the outcome of the procedure.

## METHODOLOGY:

This cross-sectional study was conducted from October 2023 to February 2024 in all dental colleges of Peshawar using purposive sampling. Students of 3rd and final-year BDS engaged in dental surgical procedures were contacted using an online research tool comprising mainly of a surgical anxiety questionnaire. This tool scores from 20 to 100, using a scale of 1 to 5 on 20 items with a cutoff of 50. A few additional questions to identify implications were also included. The data was analyzed using SPSS version 25.

## RESULTS:

A total of 256 dental students completed the questionnaire with the majority of female students (n=163, 63.7%), from the final year (n=134, 52.3%), and private dental colleges (n=189, 73.8%). A total of 101 students (39.5%) showed surgical procedural anxiety, out of which 71 were females. A total of 220 students (85.9%) considered that performance anxiety negatively affects surgical outcomes; 156 students (60.9%) thought about having negative evaluations by others while operating; while 37 students thought that performance anxiety can have a positive effect on surgical performance.

## CONCLUSION:

Surgical performance anxiety is present in more than one-third of dental students and can potentially impact negatively on surgical outcomes.

## KEYWORDS:

Dental Students, Surgical performance anxiety, Implications.

# **ASSESSING THE IMPACT OF EDUCATIONAL INTERVENTION ON DENGUE PREVENTION KNOWLEDGE AND PRACTICES IN ILLITERATE RURAL COMMUNITIES: PRE AND POST-TEST BASED STUDY**

**Khadijah Akhlaq**

Peshawar Medical College, Peshawar

## **INTRODUCTION:**

Dengue fever poses an important public health burden in rural communities. This study aims to assess the knowledge and attitude of residents living in Jahangirabad, Tehkal Bala, Peshawar, divided into two groups to observe any contrasts in knowledge, attitudes, and practices between them

## **OBJECTIVE(S):**

1. To assess elementary knowledge and awareness regarding dengue in a rural community in Peshawar
2. To observe differences in knowledge, Attitude, and practices among an intervention and control group

## **METHODOLOGY:**

A randomized control trial study was conducted in the rural communities of Jahangirabad, Tehkal Bala, and Peshawar for a month. 128 Participants were divided into intervention (69) and control groups (59). Base-line knowledge of both groups was recorded upon commencement of the study. Awareness of dengue was imparted only to the intervention group as an intervention. Data was analyzed by using descriptive statistics through SPSS. The research tool used was a pre-tested questionnaire divided into knowledge, attitudes, and practices.

## **RESULTS:**

The overall score of the knowledge section among the intervention group was  $M=55$ , and the control was  $M=39.36$ . There were no stark differences among the intervention ( $M = 55$ ) and the control group ( $M = 43.8$ ). Although practice score shows an improved difference between intervention ( $M = 50.1$ ) and control ( $M = 34.5$ ).

## **CONCLUSION:**

The study concludes that awareness given as an intervention improved the knowledge, practices, and attitudes of the intervention group. This shift sets the stage for effective dengue prevention.

## **KEYWORDS:**

Dengue, Knowledge, Attitudes, Practices, Intervention.

# **PREOPERATIVE C-SECTION ASSOCIATED ANXIETY IN MOTHERS GOING FOR THE CAESARIAN SECTION IN A TERTIARY CARE HOSPITAL PESHAWAR PAKISTAN**

**Ziaullah, Farhanullah**  
Rehman Medical Institute, Peshawar

## **INTRODUCTION:**

A common stress response is an anxiety which is present in patients undergoing C-section surgery as compared to the general surgical population. the primary aim of this study was to investigate pre-operative anxiety in patients who were undergoing C-section surgery at a tertiary care hospital in Peshawar Pakistan.

## **OBJECTIVE(S):**

1. To look into pre-operative anxiety in patients having C-section surgeries in a tertiary care facility in Peshawar, Pakistan.

## **METHODOLOGY:**

This cross-sectional study was conducted in RMI Peshawar from July 2023 to September 2023. A total of 100 patients who underwent C-section surgery were included and STAI Was the study tool used to assess preoperative anxiety in patients who were undergoing C-section surgery. The sampling technique was consecutive sampling and data was analyzed using SPSS.

## **RESULTS:**

The overall pre-operative anxiety rate was respectively (13,9,78%) mild, moderate, and severe. but the study's findings indicated that patients undergoing C-section surgery had a high anxiety rate of (78%), Additionally, we looked at the significant relationships between anxiety age, and gravida, as well as between state and trait anxiety. According to the results of the chi-square test, there was a positive relationship between anxiety TRAIT and gravida

## **CONCLUSION:**

The study discovered that the participant's average anxiety levels were measured at 78%. the high rate of pre-operative anxiety shown in this study emphasizes how important it is for healthcare professionals to identify and treat this problem to improve the overall surgical experience and patient outcome.

## **KEYWORDS:**

Pre-operative anxiety, Pregnancy, C-section surgery.

# **STREET DENTISTRY - EXPLORING PATIENTS' PERSPECTIVES ON GIVING PREFERENCE TO QUACKS OVER QUALIFIED DENTAL PRACTITIONERS**

**Ayesha Khan, Aliza Sajjad, Aiman Arshad, Mehreen Aslam Ghaza, Ansa Bibi**  
Peshawar Dental College

## **INTRODUCTION:**

There are numerous misconceptions about proper oral healthcare in the community. Therefore, instead of obtaining evidence-based care from dentists, people go to dental quacks that reinforce their confused beliefs.

## **OBJECTIVE(S):**

1. To explore the perspective of patients on giving preference to quacks over qualified dental practitioners and their experience.

## **METHODOLOGY:**

This qualitative study was conducted from November 2023 to February 2024. The study included adults who visited quacks for their dental treatment at least 2 times and were aware of the practitioner being unqualified. The sample size was determined to be 8-10 individuals using a purposive snowball sampling technique. The data was collected through semi-structured one-on-one interviews and was analysed using Braun and Clarke's thematic analysis.

## **RESULTS:**

A total of 4 interviews were taken. In the 1st cycle of coding 89 codes was made and 42 codes after the 2nd cycle. A total of 13 sub-themes were identified which then concluded into 2 themes. The first theme "Quackery's silver linings; profiting from the bright side of dental practice" included the positive aspects of fraudulent dental practices, despite their unethical nature. The second theme "Quackery's dark side; exposing the dangers within" conveyed the idea of bringing attention to the negative consequences of quackery in dentistry.

## **CONCLUSION:**

In conclusion, the study reveals the positives patients see in quacks, despite the dangers that they are exposed to. The study highlights the issues in dental practice that compels the patient to visit quacks for treatment.

## **KEYWORDS:**

Street Dentistry, Quacks, Dental Practitioners

# THE FREQUENCY OF MUSCULOSKELETAL DISORDERS AMONG DENTISTS OF PESHAWAR

Tabinda Wasim, Munazzah Iqar, Rameen Haider, Komal Hanif, Ansa Bibi  
Peshawar Medical College

## INTRODUCTION:

Musculoskeletal disorders are common among dentists primarily related to work posture and work ergonomics.

## OBJECTIVE(S):

1. To determine the frequency of musculoskeletal disorders among dentists of Peshawar.

## METHODOLOGY:

A descriptive cross-sectional study was conducted in the hospitals of Peshawar, for two months. The sample size was 200 dentists giving consent from 25 to 50 years of age and non-probability convenience-type sampling techniques were used. A reliable and valid standardized Nordic musculoskeletal questionnaire was used. Association between variables was found by chi-square test.

## RESULT:

The frequency of MSD among dentists (males =56%, females= 44 %) was assessed. The frequency of dentists belonging to orthodontics 18%, OMFS 23%, prosthodontics 19%, operative 21%, periodontics 14.8%, and the frequency of job position was assistant 17%, associate 13%, professor 16%, TMOS 53%. The most affected body regions included upper back 98%, neck 90%, thighs 77%, and lower back 76%. The age 71.6% was from (25-35%), 20% was (36-45%), 5% was (46-55%) and 1.7% was from (56-65%). There was statistically significant when gender was compared with NMQ  $\chi^2=0.36$ , 28% (df=26)  $p=0.008$ .

## CONCLUSION:

The study revealed that gender, specialties, job position, and age affect musculoskeletal disorders. The frequency of NMQ among dentists especially in the upper back, neck, thighs, and lower back was significantly higher than in the general population.

## KEYWORDS:

Frequency, Musculoskeletal, Dentists.

# **COMPARATIVE STUDY OF LIFESTYLE FACTORS AMONG MIDDLE-AGED PATIENTS WITH DIABETES WITH OR WITHOUT HYPERTENSION IN PESHAWAR, PAKISTAN**

**Faizan Ullah**, Ahmad Shah Abdali, M. Shahab, M. Rizwan, Hazrat Junaid, Fathullah Khan, Ajmal Khan  
Peshawar Medical College

## **INTRODUCTION:**

Diabetes is a chronic disease that occurs either when the pancreas does not produce enough insulin or when the body cannot effectively use the insulin it produces. Hypertension, also known as high or raised blood pressure, is a condition in which the blood vessels have persistently raised pressure.

## **OBJECTIVE(S):**

1. To compare dietary controls, physical activity and substance, use habits, stress levels, and medication adherence among middle-aged patients with diabetes with or without Hypertension in Peshawar, Pakistan.

## **METHODOLOGY:**

It is a cross-sectional comparative study, done in the endocrine unit of one of the tertiary care hospitals with a sample size of 217 calculated through Rao-soft online calculator.

## **RESULTS:**

Out of 217 patients, 50% were diabetic with hypertension and 50% were diabetic without hypertension. The majority of Diabetic patients without Hypertension exhibited greater compliance with these lifestyle factors than Diabetic patients with Hypertension, such as those without hypertension were more health-conscious and were managing their glucose level than those with hypertension. And the gender-wise distribution is the same.

## **CONCLUSION:**

This study aimed to compare the lifestyle factors among middle-aged Diabetic patients with and without Hypertension in Peshawar, Pakistan. The majority of Diabetic patients without Hypertension exhibited greater compliance with these lifestyle factors except stress than the Diabetic patients with Hypertension. The Diabetic patients with hypertension were found to be suffering more from stress than the Diabetic patients without hypertension.

## **KEYWORDS:**

Hypertension, Diabetes, Middle Age



# **ANABOLIC STEROID USAGE IN GYM TRAINEES; A QUALITATIVE ANALYSIS PERSPECTIVES OF GYM TRAINERS**

**Muhammad Hamza Khan**, Muhammad Basit Malik, Syed Zulqarnain, Azmeer Amir  
Peshawar Medical College

## **INTRODUCTION:**

Anabolic steroids are synthetic derivatives of the male hormone testosterone. The steroids like Testosterone used for enhancing performance are sometimes called doping or juicing, either in the form of tablets or injections.

## **OBJECTIVE(S):**

1. To explore the perspective of trainers regarding anabolic steroids and to determine the factors that play a contributing role towards the usage of anabolic steroids through qualitative interviews.

## **METHODOLOGY:**

This Qualitative exploratory study was conducted from October 2023 to February 2024, and included Gym trainers of Peshawar through interviews and transcripts underwent using 6 phases of thematic analysis.

## **RESULTS:**

The Saldana guidelines were employed to conduct an inductive thematic analysis for coding the transcripts. A total of 10 gym trainers from gym and fitness clubs were interviewed, and selected based on 2 or more years of experience working in gym and fitness clubs. The sample size was determined by reaching a 95% similarity in responses, at which point further interviews were ceased. In the initial coding cycle, approximately 93 codes emerged, consolidated into 35 different categories, and finally, 5 themes emerged. 1. Insights into Gym trainers: training and experience with anabolic steroid usage 2. Natural diet Vs dietary supplements: choosing health. 3. Anabolic steroid usage, personal experience, recommendation, and availability 4. Balancing gain: Anabolic steroid's impact on health and bodybuilding 5. Sustained strength: understanding long-term effects of anabolic steroids and solutions for awareness.

## **CONCLUSION:**

From the perspective of trainers and athletes, the role of medical doctors, and certified trainers must be defined with greater clarity, and anti-doping education taken more seriously.

## **KEYWORDS:**

Gym trainers, Anabolic steroids, Fitness club, Thematic analysis



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