



**LIAQUAT UNIVERSITY  
OF MEDICAL & HEALTH SCIENCES  
JAMSHORO**

# Abstract Book

**Annual  
International Conference  
of Health Professions Education**

**ICOHPE-2025-LUMHS**



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Message from the  
Vice-Chancellor  
Liaquat University of Medical & Health Sciences  
(LUMHS)

It is a matter of immense pride and joy to extend my warmest greetings to all participants of the Annual International Conference of Health Professions Education (ICOHPE) and the Grand Alumni Reunion. This occasion signifies our collective dedication to advancing the field of medical education and healthcare and fostering connections among professionals worldwide. This conference is a pivotal event in our academic calendar, serving as a platform for sharing innovative ideas, cutting-edge research, and transformative practices. It not only highlights the importance of medical education but also reaffirms our shared commitment to improving global health outcomes. LUMHS has undergone a remarkable transformation over the years, establishing itself as a leading institution in medical education, research, and healthcare services. Our journey reflects our determination to embrace innovation and uphold excellence in every facet of our work. It is a profound pleasure to see our alumni from around the globe gathered here today. They represent the rich legacy of LUMHS and are a source of immense inspiration for us all. Their achievements underscore the value of our mission to shape leaders who make meaningful contributions to society. I am confident that this event will inspire enriching discussions, foster collaborations, and strengthen the bonds within our community. My sincere gratitude goes to all the organizers, speakers, and participants who have contributed to making this conference and reunion a grand success. With best wishes for a productive and memorable event,

Prof. Dr. Ikram Din Ujjan  
Vice-Chancellor  
Liaquat University of Medical & Health Sciences (LUMHS)

Message from the  
Chairman, ICOHPE  
and Grand Alumni ReunionIt



It is my great honor to welcome you all to the Annual International Conference of Health Professions Education (ICOHPE) and the Grand Alumni Reunion. This event is an important milestone for Liaquat University of Medical & Health Sciences (LUMHS), symbolizing collaboration, innovation, and inspiration in medical education. The conference theme addresses the evolving challenges in healthcare and education. Through engaging sessions and discussions, we aim to explore new ideas to improve health professions education and practice. This gathering also marks the transformation of LUMHS, as we continue to set new standards in academic excellence, research, and innovation in medical and health sciences. A special highlight is the Grand Alumni Reunion, where we welcome our esteemed alumni from around the world. Your presence strengthens the lasting connection between LUMHS and its graduates, whose success inspires future healthcare leaders. I thank all participants, speakers, and collaborators for making this event possible. Let's use this opportunity to share knowledge, build partnerships, and shape the future of healthcare education. Wishing you a productive and memorable conference. Warm regards,

Prof. Munawar Alam Ansari  
Chairman, ICOHPE  
Liaquat University  
of Medical & Health Sciences (LUMHS)



Message from the  
Secretary Annual International Conference  
of Health Professions Education (ICOHPE)  
and Grand Alumni Reunion

It is with immense pride and joy that I extend a warm welcome to all participants of the Annual International Conference of Health Professions Education (ICOHPE). This event marks a significant milestone, the result of months of meticulous planning, unwavering dedication, and a shared vision to establish a platform that fosters academic excellence, meaningful collaboration, and global engagement. Organizing a conference of this scale requires steadfast commitment, and I am profoundly grateful to our esteemed Vice-Chancellor for their visionary leadership and unwavering support, which have been pivotal in bringing this event to life. My heartfelt appreciation also goes to the Chairman of the conference, whose strategic guidance and innovative vision have shaped this gathering into a remarkable and impactful experience. I also wish to commend the extraordinary efforts of the organizing committees. From curating insightful sessions to ensuring seamless logistics, every team member has worked tirelessly to uphold the high standards of Liaquat University of Medical & Health Sciences (LUMHS). This conference stands as a testament to the remarkable teamwork and dedication that define our institution. As we embark on this exciting journey, I am confident that this event will serve as a catalyst for transformative ideas, lasting collaborations, and a renewed commitment to advancing medical education and healthcare. May it inspire innovation, foster professional growth, and leave a lasting legacy. Wishing you all a profoundly enriching and productive experience. Sincerely,

Dr. Hudebia Allah Buksh  
Secretary Annual International Conference of  
Health Professions Education (ICOHPE)  
Liaquat University of Medical & Health Sciences (LUMHS)

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PRE-CONFERENCE WORKSHOPS				
Annual International Conference of Health Professions Education- ICOHPE 2025-LUMHS January 09-11, 2025				
Pre-conference Workshops November 28, 2024-Jan 09, 2025				
DATE	CODES	TOPIC		FACILITATOR(S)
<b>PRE-CONFERENCE WORKSHOPS (FREE)</b>				
28 <sup>th</sup> Nov 2024	PCW-01	Developing OSCE/OSPE	CDF Hospital Hyderabad BMC, LUMHS, Jamshoro	Prof. Dr. Rano Mal Piryani, Prof. Dr. Nusrat Nisar, Dr. Zahida Parveen, Dr. Nudrat Zeba
4 <sup>th</sup> Dec 2024	PCW-02	Developing TOS for Assessment	DME, LUMHS, Jamshoro	Dr. Hudebia Allah Buksh
5 <sup>th</sup> Dec 2024	PCW-03	Developing Blueprint for Assessment	Medical Education Hall BMC, LUMHS, Jamshoro	Prof. Dr. Rano Mal Piryani, Prof. Dr. Nusrat Nisar, Dr. Zahida Parveen, Dr. Nudrat Zeba
9 <sup>th</sup> Dec 2024	PCW-04	Developing Table of Specification in Medical Education	DME, LUMHS, Jamshoro	Dr. Rabia Anis
9 <sup>th</sup> Dec 2024	PCW-05	Written Assessment	DME, LUMHS, Jamshoro	Prof. Dr. Rano Mal Piryani
9 <sup>th</sup> Dec 2024	PCW-06	MCQ one best type	DME, LUMHS, Jamshoro	Dr. Hudebia Allah Buksh
10 <sup>th</sup> Dec 2024	PCW-07	Exam Games: Developing effective OSCE and TOACS	DME, LUMHS, Jamshoro	Dr. Rabia Anis
11 <sup>th</sup> Dec 2024	PCW-08	Item Analysis and Its Impact on Quality of examination	DME, LUMHS, Jamshoro	Prof. Dr. Shazia Memon
11 <sup>th</sup> Dec 2024	PCW-09	Workplace Based Assessment	DME, LUMHS, Jamshoro	Dr. Hudebia Allah Buksh
11 <sup>th</sup> Dec 2024	PCW-10	Effective Feedback: Why, How and How not.	Paeds. Seminar Room, LUMHS Jamshoro	Prof. Dr. Shaida Khatoun, Prof. Dr. Kashif Channar, Prof. Dr. Muhammad Akber
12 <sup>th</sup> Dec 2024	PCW-11	Standard Setting for Exams	DME, LUMHS, Jamshoro	Prof. Dr. Rano Mal Piryani
20 <sup>th</sup> Dec 2024	PCW-12	Research Reinvented: The power of AI	DME, LUMHS, Jamshoro	Prof. Dr. Masood Jawaid
20 <sup>th</sup> Dec 2024	PCW-13	Qualitative Research: Design and Analysis	PHYSIOLOGY TUTORIAL ROOM, LUMHS, Jamshoro	Dr. Arsalan Ahmed Uqaili
23 <sup>rd</sup> Dec 2024	PCW-14	Writing a Research Paper: A Dilemma solved by AI	DME, LUMHS, Jamshoro	Dr. Pushpa Goswami, Prof. Dr. Nusrat Nisar, Dr. Fahmida Gul
24 <sup>th</sup> Dec 2024	PCW-15	Mastering the Art of MCQ Construction: Single Best Choice Questions	PHARMACOLOGY SEMINAR ROOM LUMHS, Jamshoro	Dr. Sadat Memon, Dr. Hudebia Allah Buksh
24 <sup>th</sup> Dec 2024	PCW-16	Empowering Young Faculty: Using AI to Enhance Teaching and Learning	PHYSIOLOGY TUTORIAL ROOM, LUMHS, Jamshoro	Dr. Tazeen Shah, Dr. Arsalan Ahmed Uqaili
24 <sup>th</sup> Dec 2024	PCW-17	DOPS	PAEDS 1 SEMINAR HALL LUMHS, Jamshoro	Dr. Muhammad Akbar, Dr. Fazila Hashmi
24 <sup>th</sup> Dec 2024	PCW-18	One-Minute Preceptor	PAEDS 1 SEMINAR HALL LUMHS, Jamshoro	Dr. Fazila Hashmi, Dr. Muhammad Akbar
24 <sup>th</sup> Dec 2024	PCW-19	Assessment Toolkit: A Training Workshop on MCQs SAQs Creation	Dissection Hall of Anatomy BMC, LUMHS Jamshoro	Prof. Dr. Rano Mal Piryani, Prof. Dr. Shazia Shahani, Prof. Dr. Samreen Gul Memon
30 <sup>th</sup> Dec 2024	PCW-20	Leadership in Health Education & Practice	Diagnostic and Research Laboratory, LUMHS, Hyderabad	Dr. Yusra Shafquat, Dr. Farhan Shaikh Dr. Ali Raza Dr. Riyasat Ahmed Memon, Dr. Kiran Aamir, Dr. Aamir Ramzan, Prof. Dr. Abid Chang, Mr. Faisal Imran

## ICOHPE-2025-LUMHS

30 <sup>th</sup> 2024	Dec	PCW-21	Physicians at Cross Roads: Disclosure of Medical Errors	INDUS MEDICAL COLLEGE Tando Mohd Khan, Sindh	Prof. Dr. Inayat Ullah Memon, Dr. Umair Soomro
30 <sup>th</sup> 2024	Dec	PCW-22	Breaking Bad News in Clinical Practice: Enhancing Compassionate Communication	DME, LUMHS, Jamshoro	Prof. Dr. Kashif Ali Channar, Prof. Dr. Suneel Kumar, Prof. Dr. Shahida Khatoon
31 <sup>st</sup> 2024	Dec	PCW-23	Emergency Essentials: From Crisis to Care	IT HALL, LUMHS, Jamshoro	Dr. Kabira Memon, Prof. Dr. Irshad Alvi, Dr. Rahat Memon, Dr. Noor
31 <sup>st</sup> 2024	Dec	PCW-24	Learning Domains, Hardens integration Ladder	Department of Anatomy, LUMHS	Prof. Dr. Samreen Memon, Dr. Umbreen Bano, Dr. Pashmina Shaikh
1 <sup>st</sup> Jan 2025		PCW-25	Transforming ME: Exploring Innovative Teaching Methods for Enhanced learning Outcomes.	DME, LUMHS, Jamshoro	Dr. Kiran Amir, Dr. Nazia Mumtaz, Dr. Hudebia Alla Baksh, Dr. Aatir H Rajput
1 <sup>st</sup> Jan 2025		PCW-26	Basics of ECG Interpretation: Linking Theory to Practice	Seminar Hall, 2 <sup>nd</sup> floor, Dept. of Cardiology, LUMHS, Jamshoro	Prof. Dr. Muhammad Kashif, Dr. Owais Shams, Dr. Yusra Shaikh, Dr. Asma Ashique
2 <sup>nd</sup> Jan 2025		PCW-27	Bedside Teaching	DME, LUMHS, Jamshoro	Prof. Dr. Shazia Memon, Prof. Dr. Shahida Khatoon
2 <sup>nd</sup> Jan 2025		PCW-28	Understanding Entrustable Professional Activities (EPAs): The new era in medical education	Naimat Begum Hamdard University Hospital (NBHUH)	Dr. Saima Siddiqui
2 <sup>nd</sup> Jan 2025		PCW-29	Conducting a Systematic Review: Essential guidelines and hands on practice	Department of Anatomy, LUMHS, Jamshoro	Prof. Dr. Samreen Memon, Dr. Umbreen Bano, Dr. Pashmina Shaikh
3 <sup>rd</sup> Jan 2025		PCW-30	Scene by scene: Building Communication Skills and Professionalism with Cinemeducation	IT Hall, LUMHS, Jamshoro	Dr. Shazia Baber, Dr. Azam Afzal, Dr. Rabia Aftab
3 <sup>rd</sup> Jan 2025		PCW-31	Implication of Adult Learning Theories in Postgraduate Students	Seminar Hall, Department of Orthopedic Surgery and Traumatology Civil Hospital Hyderabad	Dr. Muhammad Faraz, Prof. Dr. Asadullah Makhdoom
4 <sup>th</sup> Jan 2025		PCW-32	Developing Assessment Blueprint	ISRA University Hyderabad	Dr. Rabia Anis, Prof. Dr. Slaman Shafique
6 <sup>th</sup> Jan 2025		PCW-33	Empowering Research with Digital Tools: A Practical Workshop on SPPS, Google Forms and Online Assessment	Dept. of Physiology LUMHS, Jamshoro Sindh	Dr. Urooj Bhatti, Dr. Keenjhar Rani, Dr. Kavita Bai
6 <sup>th</sup> Jan 2025		PCW-34	Effective Lesson Planning	Gynecology Unit 2, Seminar Room, LUMHS, Jamshoro	Dr. Najma Sheikh, Dr. Shaahida Khatoon
7 <sup>th</sup> Jan 2025		PCW-35	From Concept to Clarity: Crafting Impactful Learning Objective and Outcome	LUMHS, LUMHS, Thatta	Prof. Dr. Muhammad Asif Memon
7 <sup>th</sup> Jan 2025		PCW-36	How should a Doctor think and write? From superstitious to rational and Empirical thinking	Mohammad Medical College, Mirpurkhas	Prof. Dr. Syed Razi Muhammad, Dr. Kiran Fatima Mehboob Ali BANA
7 <sup>th</sup> Jan 2025		PCW-37	Revolutionizing Health Professions Education: Embracing Team-Based Learning	Bahria University Dental College, Bahria University, Karachi.	Dr. Anum Baqar, Dr. Akbar Abbas Zaidi.
9 <sup>th</sup> Jan 2025		PCW-38	Innovative Assessment in Medical Education	Mohammad Medical College, Mirpur Khas	Prof. Dr. Zafar H Tareen, Prof. Dr. Farzana Majeed



ONLINE WORKSHOPS (FREE)				
7 <sup>th</sup> Jan 2025	PCW-39	Leveraging Technology and AI for Innovative Health Professions Education	ZOOM	Dr. Madiha Ata, Mr. Mansoob
8 <sup>th</sup> Jan 2025	PCW-40	Reflective Narratives and Lifelong Learning: A Portfolio-Based Approach in Health Education"	ZOOM	Prof. Dr. Ghulam Sadunnisa Begum, Dr. Anshoo Agarwal, Prof. Dr. Osama Khattak
8 <sup>th</sup> Jan 2025	PCW-41	Entrustable Professional Activities (EPA)	ZOOM	Dr. Shital Bhandari
SPECIALIZED WORKSHOPS (1000/=)				
9 <sup>th</sup> Jan 2025	SC-1	Leading from the Front	IT HALL, LUMHS JAMSHORO	Prof. Dr. M Yahya Noori
9 <sup>th</sup> Jan 2025	SC-2	Learner Engagement	DME, LUMHS, Jamshoro	Prof. Dr. Moyn Aly
9 <sup>th</sup> Jan 2025	SC-3	From Fun to Fantastic: Supercharge Your Academics with Smart Learning	LUMHS JAMSHORO	Dr. Farah Rehman, Dr. Saba Iqbal

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Muhammad Medical College, Mirpurkhas

Dr. Kiran Fatima

Self assessment of active learning and critical thinking during problem based learning: an exploring study  
Background: Acquisition of knowledge and skills are the important domains for the students to direct their learning process. Self-assessment of students' knowledge and skills is one way to assess students' overall learning in any educational intervention. Self-assessment helps learners to investigate their strengths and weaknesses in learning. Problem based Learning (PBL) is known to enhance learners' active learning and critical thinking, along with sharpening other skills like professionalism, Communication, and time management.

Objective: To assess whether PBL enhances student's perception of their active learning (AL) and critical thinking skills (CT) with time and to validate the Self-Assessment of Active Learning and Critical Thinking (SSACT) questionnaire in our context.

Methods: An exploratory study using SSACT questionnaire was conducted at Bahria Dental College in Feb-2020 and Sep-2020. The questionnaire was used twice after PBL tutorials of first and second year BDS students. The data was analysed on SPSS version 23, and P-value <0.05 was considered as statistically significant.

Results: Out of a total of 100 students, 86% (41 first-year and 45 second-year) attended all four sessions of PBL and were included in the final analysis. The mean age of students was 21 + 1.56 years. There was a statistically significant difference found in the mean SAACT scores of MOD-1 & 3 of first-year and MOD-4 & 6 of the second year BDS students at a p-value of 0.000. SAACT score was increased in the third and sixth modules (87.53 and 83.04), respectively compared to the first and fourth modules (62.26 and 61.15). The reported Cronbach's Alpha was 0.735 in the first year and 0.802 in the second year cohort.  
Conclusion: Dental students' perception of AL and CT increases with time using PBL as a teaching and learning tool. The study also confirms the validity of SAACT as a self-assessment tool with the PBL strategy in our context.

Ethical Approval: BUMDC ref# 11/2020.

Keywords: Active learning, Critical Thinking, Dental Undergraduates, Problem Based Learning (PBL), Self-Assessment.

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Indus Medical College, T. M. Khan, Sindh, Pakistan

Dr. Inayat Ullah Memon

Department of Medical Education

Inter professional education IPE bringing two poles together standard of care and cost effectiveness. Introduction: Provision of quality care is basic right of all citizens. The quality care not only embodies standard of care but also provision of right care at right time by right healthcare personnel at right place. Cost-effectiveness is meant to produce health benefits at a cost, comparable to other commonly acceptable treatments, which is achieved by Cost-effectiveness analysis (CEA). This paper aims to achieve this by implementing Interprofessional Education (IPE) in our teaching / training system.

Discussion: The notion of right care denotes provision of best available care to the patients in the most appropriate settings. Meeting these demands is achievable in developed countries but in developing countries it requires radical transformation of healthcare system coupled with strong and fortified emphasis on sustained financial support. To provide care at right time obligates health care providers to apply their best knowledge, technical skill and ethical acumen to differentiate and prioritize patients as per their needs by applying technical and ethical acumen to recognize time-sensitive, life-threatening situations so as to provide right services at right place. Inter-Professional Education (IPE) means when two or more professions learn from with each other to enable effective collaboration and improve health outcomes. This is aimed to be a precursor for Interprofessional Collaborative Practice (IPCP), when health workers from different professional backgrounds work together with patients, families, and communities to deliver the highest quality of care. Conclusion and recommendations: To provide needful rights to the sick, fragile and infirm members of the community, in our settings with constrained resources is neither imaginary, nor beyond our financial and human resources, even though limited. The call of time is to implement, utilize and incorporate new frameworks like InterProfessional Education (IPE) and training in our teaching, training methods / curricula. Key words: Standard of Care, Cost effectiveness, IPE

## ICOHPE-2025-LUMHS

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Dow University of Health Sciences

Uzair Abbas

Mehreen Fatima, Niaz Hussain

Physiology; Medical Education

Assessment and Evaluation

Impact of peer assessment on lecture quality and students learning outcome in undergraduate medical education: a Quasi-experimental study Introduction Peer review enhances teaching effectiveness, but its impact on lecture quality and learning outcome in students is unclear. Many institutes follow the student's feedback system to evaluate the teaching methods. This study was designed to see the impact of peer assessment on lecture quality and student learning outcome among undergraduate medical students. Methods This quasi-experimental study included faculty (n=20) and students (n=100). The intervention group received peer review feedback; the control group received standard student evaluations. The lecture quality was assessed by 5 faculty members in each group through 5-point Likert scale. Self-assessment of faculty was also measured. Student's performance was also checked before and after the lecture Summary of Results Peer review significantly improved lecture quality ratings ( $p<0.01$ ). Faculty reported increased confidence and teaching effectiveness in their self-assessment ( $p=0.004$ ). Students were also observed to have more retention of information and higher score in post lecture assessment ( $p<0.05$ ).

Conclusio Our study shows peer review enhances lecture quality and faculty development. It also enhances knowledge retention and better assessment score. Medical schools should consider implementing peer review to improve teaching and learning outcomes.

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Prof. Dr. Hussain Bux Kolachi

Dr. Lata Kumara

Community medicine

Curriculum development of public health and community medicine

**Abstract** Authors Prof. Dr. Hussain bux Kolachi, Prof. Dr. Ghulam Hussain Baloch, Prof. Dr. Lata Kumari Dr. Wadood shah, Dr. Ambreen Qureshi, Dr. Saba Alam Introduction The postgraduate curriculum development in a special field of medical education we have developed and finalized following curriculum of public health/Community medicine in 2014 onwards.

1 MPH 2 MPhil 3 PhD 4 MCPS 5 FCPS

**Objective**

- Ø To share curriculum developed experience in community medicine
- Ø To recommend uniformity in credit hours and other paramedics of curriculum.

**Methodology**

Curriculum of MPH, MPhil, PhD, MCPS, FCPS, documents were used to conduct this study, curriculum books are available in the department of community medicine. the rules of HEC PM&DC CPSP were examined for this study duration of study of one year 2024 place Isra university department of community medicine

**Results**

The curriculum must meet PMDC, HEC, and CPSP criteria in terms of duration, credit hours, examination and assessment pattern, log books. The curriculum must be approved by board of studies, board of faculty and academic council. We have observed the PMDC, CPSP and HEC criteria are applied on the same courses but they are not similar and standardize so it is very difficult to start new PG program in public health and community medicine in medical colleges and universities of Sindh particularly in private sectors. recently HEC has relax PhD and NOC Condition so PhD and Master Programs can be started in community Medicine

**Conclusion**

Therefore, recommend workshop on curriculum development by CPSP, PMDC, Lumhs and HEC for junior and senior faculty and same standards be used by above regulatory bodies.

**Keyword**

ISRA, MPH, MCPS, Curriculum

ICOHPE-2025-LUMHS

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CMH LAHORE MEDICAL COLLEGE & INSTITUTE OF DENTISTRY

Rana Sajawal Joiya

Eisha Mansoor, Rabail Fatima, Robas Zia

Community Medicine

"Enhancing Outbreak Investigation Skills: A Comparative Study of Simulation-Based Training and Traditional Lecture among Medical Students"

Aims:

1. To assess the feasibility of Table-top Simulation Exercises (TSE) for outbreak investigation
2. To compare the effectiveness of TSE with a standard lecture

Methods:

We conducted a Randomized Controlled Trial (RCT) at Combined Military Hospital (CMH) Lahore Medical College over six months period. Purposive sampling technique was used that included 4th-year MBBS students without any prior outbreak investigation training. Participants were randomized to control (lecture) and intervention (simulation) groups. Pre and post-intervention assessments were used to measure knowledge, skills, and attitudes. Statistical analyses included t-tests, ANOVA, and descriptive statistics.

Findings:

There was a significant increase in knowledge and skills related to outbreak investigation ( $p < 0.001$ ) in simulation-based training. Although attitudes improved in both groups, the intervention group showed a notable increase ( $p = 0.068$ ). Post-test assessment prioritized the simulation-based training, favoring its impact on educational outcomes

Conclusion:

Simulation-based training enhances medical students' proficiency to investigate outbreaks more effectively than traditional lecture techniques. To augment educational outcomes and qualify aspiring healthcare professionals for real-world struggles, preceptors should think about incorporating simulation-based training into their curriculum.

Keywords:

Medical Education, Outbreak Investigation, RCT, Knowledge, skills

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Anatomy  
Teaching and Learning

Title: Undergraduate Students' preferences towards learning resources and their Study habits at Liaquat University of Medical & Health Sciences, Pakistan

Authors:

Samreen Memon; Shaheer Suhail Memon; Umbreen Bano; Pashmina Shaikh  
Affiliation: Liaquat University of Medical & Health Sciences, Jamshoro, Pakistan.

Introduction: Students have access to a variety of study materials that help them develop strong study habits, which are essential skills for success in the medical field. This study aimed to investigate undergraduate students' preferences towards study resources, and study habits and to correlate these with their grades.

Methodology: This cross-sectional study was conducted at Liaquat University of Medical & Health Sciences (LUMHS), Jamshoro, Pakistan, between July 2024 and September 2024. A stratified random sampling technique was employed to gather a sample of 379 undergraduate students studying in various degree programmes at LUMHS. Students were interviewed using an electronic questionnaire via Google Forms after written consent and an explanation of the purpose of the study. The questionnaire comprised of three sections; Demographic information, Learning resources and Study habits. The Statistical Package for the Social Sciences 26.0 was employed to analyze the data. Categorical data are presented as frequencies and percentages. Pearson's chi-squared or Spearman test was implemented to evaluate correlation. Statistical significance was reported at  $p < 0.05$ .

Results: The results indicated that majority of participants were females ( $n=240$ ), while males number was 139. The age ranged between 18 to 30 years, with majority aged between 20-24 years (84.2%). The participants in the study were enrolled in eight different disciplines. More than half of the total participants of this study were residing in university halls (58%). The factors significantly influenced students' study habits included lecture notes and presentations provided by the teachers, online courses and essential versions of text books. Almost 62% of the respondents reported CGPA between 3.5-4.0. The study habits also showed significant association with their academic performance ( $p < 0.001$ ).

Conclusion: The majority of students prefer materials provided by teachers, online courses, and essential versions of textbooks. Their study habits have a significant correlation with their academic performance.

Key Words: Undergraduate students; learning resources; study habits; CGPA

Ethical Approval: No. LUMHS/REC/-337. Dated 25-06-2024

## ICOHPE-2025-LUMHS

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Prof. Dr. Pushpa Goswami

Dr. Fahmida Gul and Dr. Farhana Rajpar

Anatomy

### Teaching and Learning

Title: Exploring Perceptions of Diversity and Inclusion among International Students in the Department of Anatomy, LUMHS, Jamshoro, Sindh, Pakistan.

Introduction: In today's globalized world, students from diverse cultures and backgrounds have the opportunity to pursue higher education across various universities. International students, in particular, face challenges such as cultural adaptation, language barriers, and integration into academic and social communities.

#### Objective:

1. To explore the perceptions of international students regarding the current diversity and inclusion practices in the department of Anatomy.
2. To identify barriers that international students may face in the department of Anatomy.

Methods: This descriptive/exploratory study was conducted in the Department of Anatomy, LUMHS. A total of 57 international students through purposive sampling technique were enrolled after their consent. Data was collected on a structured questionnaire and analyzed using descriptive statistics.

Results: Among 57 international students; majority are from Srilanka 29, followed by Jordan 10, Palestine 06, Yemen 04, Indian occupied Jammu Kashmir 04, Mauritius 03 and Maldives 01. Sinhala, Tamil and Arabic were the most common spoken languages among them. Most of the students (80%) rates the curriculum very inclusive, (75%) students were satisfied with teaching methodology in Anatomy, Arab students feel uncomfortable in class discussions while Srilankan students' rates either neutral or comfortable. There is strong peer support for diversity and inclusion (65%). Regarding challenges faced by international students (95%) students recognized the language as a barrier in inclusion and achieving the excellence in academia.

Conclusion & Recommendations: Majority of students are satisfied with the teaching methods (75%) and feels comfortable participating in class discussions (65%). Addressing language barriers and providing additional cultural support could help foreign students overcome challenges in adapting to the program.

Key Words: Anatomy, Curriculum, Diversity, Inclusion, International students.



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LIAQUAT COLLEGE OF MEDICINE AND DENTISTRY

DR. MARYAM

DR. RABAIL KHERO, DR. IQRA ALI, PROF. DR. UZMA ZAREEF

ORAL PATHOLOGY

Teaching and Learning

TITLE:

## A SYSTEMATIC REVIEW ON THE EARLY DETECTION OF ORAL CANCER USING ARTIFICIAL INTELLIGENCE AND ELECTRONIC TONGUE TECHNOLOGY

**Introduction:** Oral cancer is a significant public health concern in Pakistan and worldwide accounting for a substantial burden of morbidity and mortality. Several studies have explored the application of AI and e-tongue technology in early oral cancer detection, highlighting the potential for improved sensitivity, specificity, and cost-effectiveness compared to traditional methods

**Objective:** This systematic review examines the role of artificial intelligence (AI) and electronic tongue (e-tongue) technology in the early detection of oral cancer.

**Methods:** A comprehensive search of PubMed, Scopus, and Web of Science databases identified 500 articles, of which 20 met the inclusion criteria and were included in the review. The included studies encompassed diverse methodologies, AI models, and e-tongue technologies, with a total of 5,000 participants across various populations.

**Results:** AI-driven models, particularly those utilizing deep learning algorithms, demonstrated high sensitivity (>85%) and specificity (>80%) in detecting oral cancer biomarkers. E-tongue technologies, such as mass spectrometry and optical sensors, contributed to enhanced diagnostic accuracy, with area under the curve (AUC) values exceeding 0.85 in several studies. While promising, challenges such as study heterogeneity, validation in large-scale trials, and implementation barriers require further attention.

**Conclusions:** The findings highlight the transformative potential of AI and e-tongue technology in revolutionizing oral cancer screening and management, with implications for improving patient outcomes and reducing healthcare costs. Future research should focus on standardization, validation, and real-world implementation to harness the full benefits of these innovative approaches in clinical practice.

**Key words:** Oral cancer, Artificial intelligence, Electronic tongue technology

## ICOHPE-2025-LUMHS

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Liaquat Institute of medical and health sciences (LIMHS) Thatta

Dr. Sara Khalid Memon

Prof. Sughra Parveen, prof. Mashooque Khowaja

General Surgery

Assessment and Evaluation

Title: Surgical audit at Civil hospital Thatta, Sindh

Objective:

1. To evaluate the surgical cases admitted at civil hospital Makli, Thatta
2. To evaluate the surgical procedures performed at civil hospital Makli, Thatta

Methodology:

After getting approval from the ethical research committee of Liaquat University of Medical and Health Sciences (LUMHS), a cross-sectional study was conducted. Data was collected using patient's record after approval from head of department of Surgical department of civil hospital Makli Thatta. All variables, i.e. month of admission, gender, diagnosis, management plan and procedures performed for the cases were evaluated using SPSS 16 software, using descriptive analytics for the variables.

Results:

A total of 730 patients were admitted as inpatient from April 2024 to September 2024, including both OPD and emergency admissions. More than half of them were male (59.5%). The number of admissions per month were ranging from 101 to 139, highest being in the month of August. Out of 730 patients, 73 (10%) were managed conservatively, 202 (27.7%) had left against medical advice (LAMA) whereas 455 (52.3%) were managed surgically. Most common cause of admission was due to inguinal hernias which makes 186 cases (25.5%), followed by hemorrhoids (20.5%) and Cholelithiasis (18.5%). The total number of performed surgical cases were 459, out of which most performed surgical procedures were Lichenstein Mesh repair (22.9%), followed by Open hemorrhoidectomy (22%) and Laparoscopic Cholecystectomy (19.4%). The least performed procedures were Z plasty after excision of pilonidal sinus (0.4%) and total thyroidectomy and lobectomy (0.4%) followed by Delorme's rectopexy (0.7%) and open cholecystectomy (0.7%) and mesh repair for ventral hernias (0.9%).

Conclusion:

After upgradation of hospital status from district health quarter to tertiary care, surgical Audit makes an important contribution in evaluating the effectiveness of proper outpatient and inpatient patient evaluation followed by proper surgical procedures performed for the benefit of poor community living in Thatta, Sindh

Keywords

Surgical cases, audit, inguinal hernia, cholelithiasis, Thatta

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Dr Saima Siddiqui

Dr Ayesha Basit

Hamdard university (FH&MS)

Assessment of Individual Learning Styles amongst different levels of Dental Fraternity at Hamdard University Dental Hospital.

#### ABSTRACT

##### Objective

The purpose of this descriptive, cross-sectional study was to assess learning outcomes and learning styles across students at various academic levels.

##### Materials and Methods

The 235 students, interns, and faculty members from Hamdard University Dental Hospital had their learning outcomes examined using a well-known system called Visual, Aural, Read/Write, and Kinesthetic (VARK). This survey was conducted with 235 participants, including professors, lecturers, interns, and students at all levels as well as faculty members. The respondents' learning outcomes were examined using the well-known and valid VARK questionnaire, and the findings were subsequently statistically examined.

##### Results

Students learn primarily through hearing in the first several years of the BDS, with the help of reading and writing in the second year. In the clinical year, students learn more through kinesthetic means. Lecturers and postgraduate students rely more on their kinesthetics. Given that senior faculty members are more interested in research, they prefer to learn by reading and writing with the help of kinesthetic and auditory aids.

##### Conclusion

Individual differences in learning styles exist, and both teachers and students need to be aware of their learning styles in order to improve their performance.

## ICOHPE-2025-LUMHS

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Bahria University

Dr Akbar Abbas

Dr Anum Baqar and Dr Saman Hakeem

Dental Education/ Prosthodontics

### Teaching and Learning

Title: Comparing Dental Undergraduates' Perceptions Regarding Case-Based Learning and Problem-Based Learning: A Karachi Multi-Center Survey.

Objective: This study investigated and compared dental students' perceptions regarding case-based learning (CBL) and problem-based learning (PBL) in Karachi, Pakistan. Methods: This was a cross-sectional analytical survey conducted across four institutions in Karachi from March to December 2021. The convenience sampling technique was used to extract the sample. The sample size of 384 was calculated using Open epi. The third and final-year undergraduate dental students who had experience with PBL and CBL participated. Feedback on the effectiveness & utility of PBL and CBL was gathered through a 5-point Likert scale. Results were checked for the significant association of variables under investigation through the utilization of an independent t-test. A p-value of 0.05 or less served as the benchmark for statistically significant findings. Results: The survey was participated by 387 students, including 20.8% males and 79.1% females. Overall, 68.2% were satisfied with CBL as compared to PBL. 63.6% recommended using it as a prioritized teaching method, especially in the curriculum of clinical years of dentistry i.e. 64.3%. They praised its effectiveness in terms of decision-making, real-life application, achieving a higher level of knowledge, understanding course objectives, and managing time effectively. Students also valued PBL for enhancing their critical thinking, decision-making, and communication skills. The majority( 57 . 4 %) suggested employing it in the pre- clinical years of dentistry. Conclusion: Dental students in Karachi favor CBL for its effective knowledge acquisition and practical application while acknowledging PBL's strengths in developing critical thinking and communication skills. However, future research exploring faculty perspectives and cross-disciplinary comparisons is recommended.

Keywords: problem-based learning, dental students, curriculum, active learning, decision-making, dental education.

IRB: Approved by the Ethical Review Committee, Bahria University Medical and Dental College. Ref#ERC 72/2020.

Prof Dr Thomas V Chacko

Dean Medical Education Believers Church Medical College, Thiruvalla, India

## ABSTRACT

As part of a global initiative for ensuring patient safety and also to meet the country's health needs, the Lancet Commission Report (2010) recommended the need for transitioning from traditional disciple-based to a Competency Based Medical Education (CBME) curriculum to produce a competent Medical Graduate who is a basic doctor who can provide leadership and work with health team that provides care to meet community's health care needs.<sup>[1]</sup>

This curricular change, and the need for teachers to facilitate & ensure student learning, posed several challenges for adoption of the new CBME curriculum which is outcomes-based to ensure acquisition of competencies needed. These include challenges for the teachers, for the students and for the Institution in implementing the new CBME curriculum.<sup>[2]</sup>

Fortunately for us, this global level curricular transition along with the accompanying student problems with learning happened almost 3 decades earlier and so we in this part on the global south can borrow from the experiences gained globally in designing innovations in medical education and research evidence of effectiveness of those innovations.

This presentation therefore starts with stating the reasons for innovations in HPE that emerged globally as well as the need for research on innovations in HPE - namely the evidence that these innovations are needed and that they work (are effective) in the global south context (developing world) too.

The importance of starting from a good idea or a problem with student learning to a research question and use of conceptual frameworks that illuminate factors that influence in different contexts of teaching-learning are good practices for researchers in HPE to emulate since it becomes of interest to audience (other researchers) outside the local context and so becomes valued and therefore publishable.<sup>[2,3,4]</sup>

A systematic and scholarly approach to planning and implementation of Research in Medical Education like use of Program Theory of Change for understanding the interconnectedness of outcomes with the educational innovation; the Logic Model to plan and identify activities and outcome indicators to be measured makes it possible to write with clarity a good description of the educational innovation for it to be replicable in other institutional settings including even replication of methods & tools used (if they are novel and validated) for medical education research.<sup>[5]</sup>

Some practical tips to remember to ensure educational innovations get published are also presented.<sup>[6]</sup>

*Keywords:*

*Competency Based Medical Education, curriculum Health Profession Education, Research*

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available from [https://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736\(10\)61854-5.pdf](https://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736(10)61854-5.pdf)

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“Exploring the transformative potential of generative AI in Health Professions Education”

Dr Michael Rowe

Associate Professor and Director of Digital Innovation and Simulation in the School of Health and Care Sciences at the University of Lincoln in the United Kingdom.

**Abstract**

This presentation explores the transformative potential of generative AI in health professions education, addressing both opportunities and challenges that educators face in this rapidly evolving landscape. Drawing from current developments in AI, it presents a practical framework for integrating these technologies into educational practice, emphasizing how generative AI is reshaping traditional approaches to teaching and learning in healthcare education. The presentation highlights AI's role in creating personalized learning experiences, developing teaching materials, and AI-supported assessment, exploring the shift towards embracing AI as a collaborative tool in education. Evidence is presented demonstrating AI's capability to generate high-quality educational resources, including illness scripts and case studies, while maintaining pedagogical integrity. Particular attention is paid to the development of "AI-supported assessment" rather than "AI-proof assessment," suggesting a paradigm shift in how educators approach student evaluation. The presentation concludes that resistance to AI integration in health professions education is both futile and counterproductive, advocating instead for a proactive approach where educators leverage AI to enhance their teaching practices while maintaining a focus on core educational objectives. It argues that meaningful education reform, rather than simply modifying assessment methods, is essential for preparing healthcare professionals in an AI-augmented future. This work provides practical insights for educators seeking to navigate the integration of AI in health professions education while maintaining high educational standards and professional values.

*Keywords:*

*Generative AI, Healthcare professionals, Health professions education, Paradigm shift*

Training Workshop on Conducting Workplace-based Assessment (WPBA) using mini-Clinical Evaluation Exercise (mini-CEX) tool.

Rano Mal Piryani<sup>1</sup>, Suneel Piryani<sup>2</sup>, Abdul Ghani Soomro<sup>3</sup>

Abstract

Introduction:

mini-Clinical Evaluation Exercise (mini-CEX) is one of the valid, reliable, feasible and effective tools used for workplace-based assessment (WPBA). Faculty development is essential to train the assessors for successful implementation. Bilawal Medical College, a constituent college of Liaquat University of Medical and Health Sciences, Jamshoro Sindh Pakistan organized a one-day Training Workshop (TW) on "Conducting WPBA using mini-CEX tool" for clinical faculty members.

Material and Methods:

The objectives of this descriptive cross-sectional study were to 1) report brief description of the TW and process of group-work practice session; 2) assess feedback of the participants at New World Kirkpatrick's Model (NWKM) level I and II and 3) assess the cognition of participants about miniCEX using pretest-posttest. Feedback of the participants was taken on the valid questionnaire. Pretest and posttest were done utilizing the same format. Narrative description of the proceedings and process documented. Data of the feedback, pretest and posttest was analyzed with SPSS for central tendency and paired t-test was used for comparison.

Results:

Description of TW is documented in methods section of this article. Rating of the participants for attributes (usefulness, content, relevance, facilitation and overall) of TW and practice session on scale 1-10 (1=poor; 10=excellent) were remarkable. Significant enhancement ( $p<0.001$ ) in the level of knowledge and understanding was perceived by the participants regarding the performance-based assessment (PBA), WPBA and utility of mini-CEX as a tool for assessment. The participants perceived significant ( $p<0.001$ ) positive change in the level of confidence for conducting WPBA utilizing the miniCEX tool. The cognition of the participants was significantly ( $p<0.003$ ) improved after participation in the TW revealed in pretest-posttest analysis.

Conclusion:

Based on the findings of results, this TW was successful in educating medical faculty members about the utility of training for conducting WPBA, specifically with miniCEX tool.

*Keywords: Feedback; Faculty; miniCEX; Pretest-Posttest; Training Workshop; WPBA.*

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Training Workshop on Developing OSCE/OSPE: Feedback of the participants

Rano Mal Piryani<sup>1</sup>, Suneel Piryani<sup>2</sup>, Nusrat Nisar<sup>3</sup>, Zahida Parveen<sup>4</sup>, Nudrat Zeba<sup>5</sup>, Hudebia Allah Buksh<sup>6</sup>

Abstract

Introduction:

Objective Structured Clinical Examination (OSCE)/Objective Structured Practical Examination (OSPE) is a tool used for the assessment of skills and attitude at the Miller's pyramid level-3 i.e. "Show How". Training of the faculty members is critical to use any tool for the assessment of learners. Bilawal Medical College (BMC), a constituent college of Liaquat University of Medical and Health Sciences (LUMHS), Jamshoro Sindh Pakistan organized a one-day Training Workshop (TW) on Developing OSCE/ OSPE. This workshop was one of the preconference workshops of the Annual International Conference of Health Profession Education (ICOHPE-2025-LUMHS).

Material and Methods:

This is a descriptive cross-sectional study. The objective of this study was to assess the feedback of the participant faculty members at New World Kirkpatrick Model Level 1-2. The TW was held on November 28, 2024 at Countenance Difference Fund (CDF) Hospital Hyderabad, one of the teaching hospitals of BMC. The valid questionnaire was used to take feedback from the participants. The data was analyzed with SPSS version-24 for the central tendency and paired t-test was used for the comparison of responses of retro-pre-questions.

Results:

Rating of the participants on attributes of workshop on scale 1-10 (1=poor, 10=excellent) was notable: usefulness  $8.07 \pm 1.87$ , content  $8.27 \pm 1.28$ , relevance,  $8.47 \pm 1.46$ , facilitation  $8.80 \pm 1.32$  and overall  $8.40 \pm 1.06$ ; rating on the practice session was too  $8.47 \pm 1.19$ . Knowledge and understanding about OSCE/OSPE on Likert scale 1-4 ((1=Little; 4=Very Good) was significantly improved (before participation  $2.07 \pm 0.59$ , after participation  $3.47 \pm 0.64$ )  $p < 0.001$ . On Likert scale 1-4 (1=Not Confident; 4=Extremely Confident), confidence of participants in developing OSCE/OSPE stations (before participation  $2.20 \pm 0.68$ , after participation  $3.40 \pm 0.51$ ) and conducting OSCE/OSPE session (before participation  $2.13 \pm 0.83$ , after participation  $3.40 \pm 0.51$ ) was enhanced significantly  $p < 0.001$ .

Conclusion: The immediate perception of the participants after the training workshop was positive. Their cognition about OSCE/OSPE was significantly improved and confidence significantly enhanced in developing OSCE/OSPE and conducting OSCE/OSPE exam.

*Keywords: Assessment, Feedback, Kirkpatrick Model, OSCE/OSPE, Training Workshop.*

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Participants' level of confidence after participation in Training Workshop on Assessment in Health Professions Education

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Abstract

Introduction:

Assessment is a basic component of teaching and learning as it focuses on what learners learn and how they are certified. Training of the faculty members in this regard is indispensable in health professions education (HPE). For enhancing skills of faculty members in developing assessment tools, Bilawal Medical College (BMC), a constituent college of Liaquat University of Medical and Health Sciences (LUMHS), Jamshoro Sindh Pakistan organized a two-days Training Workshop (TW) on Assessment in HPE.

Material and Methods:

This descriptive cross-sectional study was conducted with the objective to assess feedback of the participants, especially their confidence level in developing different tools of assessment at New World Kirkpatrick Model Level 1-2. This TW was held on November 08 & 10, 2022 at BMC College Campus. The valid questionnaire was used to take feedback from the participants. Data of feedback was analyzed with SPSS version-24 for the central tendency and paired t-test was used for the comparison of responses of retro-pre-questions.

Results:

Age of participants was  $40.00 \pm 9.03$  years; 41.2% for male and 58.8% for females. Their teaching and research experiences were  $5.12 \pm 4.63$  and  $2.71 \pm 3.94$  years respectively. Participants' rating on the attributes of workshop i.e. usefulness, content, relevance, facilitation and overall on scale 1-10 (1=poor, 10=excellent) was  $8.65 \pm 1.22$ ,  $8.65 \pm 0.99$ ,  $8.65 \pm 1.17$ ,  $8.76 \pm 1.09$ , and  $8.88 \pm 1.11$  respectively. Their confidence level on Likert scale 1-4 (1=Not Confident; 4=Extremely Confident) in developing Multiple Choice Questions (MCQs) (before-participation  $2.35 \pm 0.6$ , after-participation  $3.59 \pm 0.51$ ); item analysis of MCQs (before-participation  $2.06 \pm 0.83$ , after-participation  $3.47 \pm 0.62$ ); developing Objective Structured Clinical Examination-OSCE/Objective Structured Clinical Examination-OSPE (before-participation  $2.12 \pm 0.69$ , after-participation  $3.41 \pm 0.71$ ); developing Task Oriented Assessment of Clinical Skills-TOCAS (before-participation  $2.00 \pm 0.71$ , after-participation  $3.12 \pm 0.78$ ) and screening research proposal (before-participation  $2.06 \pm 0.96$ , after-participation  $2.94 \pm 0.75$ ) were enhanced significantly  $p < 0.001$ .

Conclusion: Immediate perception of the participants after the training workshop was positive and their perceived level of confidence in developing different tools of assessment was significantly enhanced.

*Keywords: Assessment, Confidence, Feedback, Kirkpatrick Model, Training workshop.*

Presenter: Nudrat Zeba

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Evaluation of the feedback of the participant of Training Workshop on Developing Blueprint for Assessment at New World Kirkpatrick Model Level 1-2.

Rano Mal Piryani<sup>1</sup>, Suneel Piryani<sup>2</sup>, Nusrat Nisar<sup>3</sup>, Zahida Parveen<sup>4</sup>, Nudrat Zeba<sup>5</sup>, Hudebia Allah Buksh<sup>6</sup>

Abstract

Introduction:

Training of the faculty members is essential in health professions education. For enhancing the skills of the faculty members for developing blueprint for assessment, Bilawal Medical College (BMC), a constituent college of Liaquat University of Medical and Health Sciences (LUMHS), Jamshoro Sindh Pakistan organized a one-day Training Workshop (TW) on Developing Blueprint for Assessment. This TW was one among the preconference workshops of the Annual International Conference of Health Profession Education (ICOHPE-2025-LUMHS).

Material and Methods:

This descriptive cross-sectional study was done with the objective to assess the feedback of the participants at New World Kirkpatrick Model Level 1-2. The TW was held on December 05, 2024 at BMC College Campus Jamshoro. The valid questionnaire was used to take feedback from the participant faculty members. The data of the feedback was analyzed with SPSS version-24 for the central tendency and paired t-test was used for the comparison of responses of retro-pre-questions.

Results:

Participants' rating on the attributes of workshop i.e. usefulness, content, relevance, facilitation and overall on scale 1-10 (1=poor, 10=excellent) was  $8.32 \pm 1.61$ ,  $8.00 \pm 1.56$ ,  $8.46 \pm 1.50$ ,  $8.50 \pm 1.36$ , and  $8.45 \pm 1.45$  respectively. The rating on the practice session was remarkable too  $8.57 \pm 1.32$ . Knowledge and understanding about fundamentals of assessment on Likert scale 1-4 (1=Little; 4=Very Good) was significantly enhanced (before participation  $2.04 \pm 0.79$ , after participation  $3.43 \pm 0.57$ )  $p < 0.001$  and about blueprint for assessment too (before participation  $1.96 \pm 0.96$ , after participation  $3.25 \pm 0.58$ )  $p < 0.001$ . Their confidence level on Likert scale 1-4 (1=Not Confident; 4=Extremely Confident) in developing blueprint for assessment (before participation  $1.89 \pm 0.79$ , after participation  $3.07 \pm 0.66$ ) was heightened significantly  $p < 0.001$ .

Conclusion: The immediate reaction of the participants after the training workshop was constructive. Their knowledge and comprehension were significantly enhanced about fundamentals of assessment and blueprint for assessment. The perceived confidence level of the participants in developing a blueprint for assessment was significantly improved.

*Keywords: Assessment, Blueprint, Feedback, Fundamentals of assessment. Kirkpatrick Model, Training workshop.*

Presenter: Zahida Parveen

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Our experiences in running Certificate in Health Professions Education course at Liaquat University of Medical and Health Sciences, Jamshoro, Sindh Pakistan.

Rano Mal Piryani<sup>1</sup>, Hudebia Allah Buksh<sup>2</sup>, Ikramuddin Ujjan<sup>3</sup>, Shazia Memon<sup>4</sup>

#### Abstract

##### Introduction:

One of the core roles of health professionals working in medical, dental, nursing and allied health sciences institutes is a teacher. Teachers have to play multiple roles; for which capacity development is essential for understanding the basic and applied concepts of health professions education. Six-month duration "Certificate in Health Professions Education (CHPE)" course is necessary for faculty members to learn about the basic concepts and basics of applied concepts of health professions education.

##### Objective & Methodology:

The objective of the narrative was to describe experiences of running CHPE course at Liaquat University of Medical Health Sciences (LUMHS) Jamshoro Sindh, Pakistan. Documents related to planning, approval, curriculum, implementation of course and feedback of the participants were explored.

Description: LUMHS started CHPE course in 2021. Committee designed curriculum, developed admission policy and implementation strategy in 2020. The course has 3 modules titled Teaching/Learning, Assessment and Curriculum. Three 4-days face-to-face interactive contact sessions are conducted with a gap of every two months; in between vignette-based assignments are given to candidates. The assessment consists of three components; internal assessment during each contact session, assessment of assignments, and exit-exam. Between 2021 and 2023, 144 candidates qualified in six batches. Written and verbal feedback was taken from the participants.

##### Conclusion:

Overall verbal feedback was positive and candidates seemed to be satisfied with content, process and proceedings of course; long-term impact cannot be deduced from immediate feedback. We believe, CHPE course, builds the capacity of professionals of health professions education as a teacher.

*Keywords: Certificate Course, CHPE, Health Professions Education*

Presenter: Hudebia Allah Buksh<sup>2</sup>

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Our experiences in initiating implementation of electives at a Bilawal Medical College, Liaquat University of Medical and Health Sciences, Jamshoro, Sindh Pakistan.

Rano Mal Piryani<sup>1</sup>, Abdul Ghani Soomro<sup>2</sup>, Shahzad Ahmadani<sup>3</sup>, Razia Asif<sup>4</sup>, Asiya Parveen Shaikh<sup>5</sup>.

#### Abstract

##### Introduction:

Electives supplement to the core curriculum of undergraduate health professions education, thereby enriches personal and professional development of undergraduates in diverse areas. Electives provide an opportunity for transformative learning.

##### Objective

The objective of this narrative was to describe the implementation of electives at newly established Bilawal Medical College (BMC) for Boys. Documents related to planning, approval, curriculum, implementation and feedback were explored for assessing and describing the implementation of electives.

##### Description:

BMC is a constituent college of Liaquat University of Medical Health Sciences (LUMHS), Jamshoro, Sindh, Pakistan. A concrete policy for the electives was developed by health professions educationist (first author) and got approval from the Vice Chancellor of LUMHS in 2021. Then the Committee for the implementation of electives was constituted and a summary curriculum developed in consultation with the departments where students have to be posted for electives. Subsequently, a feasible and achievable implementation plan was formulated focusing on the activities to be done before, during and after the placement of students for electives in different departments and process of implementation. Fourth year students were oriented and given the option whether they have to do electives at BMC organized structured-program for electives or explore outside of it. Those who opted for doing elective in BMC organized structured-program were guided for entire process. The first batch of students studying in fourth year of MBBS attended the electives in year 2022 and second batch in 2023.

##### Conclusion:

With keen involvement of all stakeholders such as, students, faculty, administration, parents and collaborating departments and their faculty, the program was successfully implemented. Thorough supervision and monitoring during placement contributed toward the success of the program.

Presenter: Abdul Ghani Soomro<sup>2</sup>

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## Training Workshop on Research Proposal Writing for Faculty Members :

## Assessment of the Feedback of the Participants

Rano Mal Piryani<sup>1</sup>, Nudrat Zeba<sup>2</sup>, Farah Naz Memon<sup>3</sup>

## Abstract for poster presentation

## Background &amp; Objective:

Proposal writing training enriches faculty members' capacity in conducting research. The objective of this study was to assess direct feedback (reactions) from faculty members participating in a research proposal writing training workshop.

## Methodology:

This was a cross-sectional study conducted through a self-administered questionnaire. The data was analyzed for central tendency. Pre-questionnaire data were retro skewed, so the Wilcoxon Signed Rank Test was used for median comparisons.

## Results:

The results of this study found a ranking of training workshop attributes, namely usefulness ( $8.71 \pm 1.23$ ), content ( $8.86 \pm 1.15$ ), relevance ( $8.90 \pm 1.18$ ) and facilitation ( $9.09 \pm 1.15$ ). .09) was also quite prominent and overall ( $9.05 \pm .97$ ). Participants' confidence levels increased significantly ( $<0.001$ ) on six relevant cognitive skills items; conducting research (before Median-2, IQ-1, after Median-3, IQ-0); conducting a systemic review (before Median-2, IQ-1, after Median-3, IQ-1), choosing a research design (before Median-2, IQ-2, after Median-3, IQ-0), applying basic biostatistics (before Median-2, IQ-1, after Median-3, IQ-0), academic writing (before Median-2, IQ-1, after Median-3, IQ-0) and research proposal writing (before Median-2, IQ-1, after Median-3, IQ-0).

## Conclusion:

Overall the feedback from the participants was positive and excellent and their confidence levels increased significantly on the cognitive skills assessment.

*Keywords: Faculty, Feedback, Proposal, Research, Training, Workshop*

Presenter: Farah Naz Memon

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## Poster Presentation

## Title:

Feedback of the Medical Teachers participated in Training Workshop on “Workplace-based Assessment in Health Professions Education”

Rano Mal Piryani<sup>1</sup>, Nasir Ali Afsar<sup>2</sup>, Nudrat Zeba<sup>3</sup>, Suneel Piryani<sup>4</sup> Hudebia Allah Buksh<sup>2</sup> Saba Soomro<sup>6</sup>

## Introduction:

Workplace-based Assessment (WPBA) has the ability to assess performance of learners i.e. skills and attitude in a wide range of real life competencies that are relevant to medical practice. For engaging medical teachers in WPBA, their training in this regard. Bilawal Medical College (BMC), Liaquat University of Medical Health Sciences (LUMH), Jamshoro, Sindh, Pakistan organized a Pre-Summit Training Workshop on “Workplace-based Assessment in Health Professions Education” as a part of International Academics & Research Summit LUMHS 2022. The objective of this study was to assess the written feedback of the participants.

## Methodology:

This is descriptive cross-sectional study done in December 06, 2022. The valid self-administered questionnaire was used to take feedback of the participant medical teachers. The data was entered in Excel Microsoft and analyzed for central tendency, mean (M) and standard deviation (SD). Responses of open-ended questions were analyzed manually.

## Results:

There were 3 males & 15 females. The mean age of the participants was  $34 \pm 4.2$  years; their teaching and research experiences were  $5.5 \pm 0.71$  and  $4 \pm 9.2$  years respectively. Their response on attributes of workshop on scale 1-10 (1=poor, 10=excellent) was notable i.e. on usefulness  $8.5 \pm 0.71$ , content  $8.5 \pm 0.71$ , relevance  $8.0 \pm 1.41$ , facilitation  $9.0 \pm 1.41$  and overall  $9.5 \pm 0.71$ . The participants feedback on characteristics of small group work discussion was remarkable too. (usefulness  $9.0 \pm 1.50$ , content  $8.5 \pm 0.71$ , relevance  $9.0 \pm 1.31$ , facilitation  $9.5 \pm 1.71$ , discussion  $8.5 \pm 0.71$  and participation  $9.0 \pm 1.41$ . Level of confidence on conducting WPBA on retro-pre-question on Likert scale 1-4 (1=Not Confident; 4=Extremely Confident) before participation  $2.5 \pm 0.71$  and after participation  $3.5 \pm 0.71$  was significantly ( $p < 0.05$ ) enhanced.

## Conclusion:

The feedback of the medical teachers on attributes of training workshop and characteristics of small group work discussion was noteworthy and their confidence level significantly boosted in conducting WPBA.

Keywords: Confidence level, Medical teachers, Training workshop, WPBA

Presenter: Saba Soomro

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## Training Workshop on Teaching/Learning in Health Professions Education for Medical Teachers: Feedback of the Participants

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### Abstract

#### Background

For enhancing teaching skills of faculty members, 3-day Training Workshop on Teaching/Learning in Health Profession Education was organized at Bilwal Medical College Liaquat University of Medical and Health Sciences Jamshoro Sindh Pakistan. Main objective of the study was to assess feedback of the participants at New World Kirkpatrick's Model level 1 and 2.

#### Methods

This was cross-sectional study conducted using self-administered questionnaire. The questionnaire had 5-parts; 1) Demographics; 2) Rating of participants on attributes of training workshop at scale 1-10 (1=poor, 10=excellent); 3) Confidence level of the participants on skills learned in specific session at Likert scale 1-4 (1=Not-confident, 4=Extremely-Confident) on retro-pre-questionnaire; 4) Open-ended questions on strengths of workshop and 5) areas for improvement. The data was analyzed for central tendency. The data of retro-pre-questionnaire was normally distributed, so, t-test used for comparison of means. Data of open-ended questions was sorted manually.

#### Results

The rating on attributes of training workshop i.e. usefulness ( $8.59 \pm 1.18$ ), content ( $8.53 \pm 1.12$ ), relevance ( $8.59 \pm 1.23$ ) and facilitation ( $9.18 \pm 0.95$ ) was notable and overall ( $8.82 \pm 0.95$ ) too. The perceived confidence level of participants was significantly ( $< 0.001$ ) enhanced on five Skills Learned in Specific Sessions of Training Workshop: developing learning objectives (before  $2.24 \pm 0.44$ , after  $3.29 \pm 0.47$ ); developing effective PowerPoint presentation (before  $2.59 \pm 0.51$ , after  $3.06 \pm 0.56$ ), conducting large group teaching (before  $2.53 \pm 0.72$ , after  $3.12 \pm 0.60$ ), developing lesson plan for teaching (before  $2.12 \pm 0.60$ , after  $3.18 \pm 0.64$ ), and conducting small group teaching (before  $2.76 \pm 0.75$ , after  $3.41 \pm 0.51$ )

#### Conclusion

Overall reaction of the participants was constructive and their confidence level was significantly enhanced on specific skills related to teaching/learning.

*Keywords: Faculty, Feedback, Medical teachers, Teaching/Learning, Training, Workshop*

Presenter: Nudrat Zeba

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Exploring Factors Affecting Empathy Erosion Among Medical Students at public sector university in pakistan

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2. Incharge, Department of Medical Education, Liaquat University of Medical & Health Sciences, Jamshoro

Abstract

**Background:** Empathy is a critical component of medical professionalism, yet its erosion is a prevalent concern, particularly during clinical training. This study explores factors contributing to empathy decline among medical students across preclinical and clinical stages.

**Methods:** A cross sectional study was employed, utilizing quantitative data from the Jefferson Scale of Physician Empathy (JSE-HPS) and thematic analysis of qualitative responses. 302 participants were equally grouped into preclinical (Group A: 1st & 2nd years) and clinical (Group B: 4th & final years) stages. Factors influencing empathy decline were categorized into academic, personal, institutional, and cultural domains.

**Results:** Group A exhibited higher mean empathy scores ( $116.5 \pm 8.2$ ) compared to Group B ( $101.2 \pm 5.1$ ,  $p=0.015$ ). Stress levels and emotional exhaustion were significantly higher in Group B, with 58.3% reporting moderate stress compared to 43.0% in Group A. Key factors contributing to empathy erosion included academic pressure (heavy workload: 40.4% in Group B vs. 24.5% in Group A), clinical exposure (emotional desensitization: 20.5% in Group B vs. 12.6% in Group A), and lack of empathetic role models (35.1% in Group B vs. 21.8% in Group A). Cultural norms, institutional challenges, and personal stressors further exacerbated empathy decline in Group B.

**Conclusion:** Empathy erosion is a multifactorial issue, with clinical students disproportionately affected due to increased stress, inadequate support, and systemic barriers. Interventions such as empathy-focused curriculum reforms, improved institutional support, and mental health resources are essential to fostering empathy in medical education.

**Keywords:** Empathy erosion, medical students, clinical training, stress, curriculum reform.



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Dr. Kavita Bai, Dr. Keenjher Rani, Dr, Feriha Khidri, Dr. Khalida Shaikh, Dr. Hudebia Allah Buksh

Department: Physiology

Title: Perceptions of Medical Students Toward Computer-Based Assessments: A Shift in Evaluation Paradigms”

### Background

In medical teaching, the assessment is playing the pivotal role. The traditional methods of assessment are paper and pen based, either by short essays or by multiple choice questions or best choice questions. With advances in Medical Education, the computer based assessment of students has been introduced and implemented at Liaquat University of Medical and health sciences, (LUMHS) Jamshoro. This study aimed to explore and analyze student perceptions of computer-based assessments (CBA) at LUMHS, providing valuable insights that can guide future educational practices and policies.

### Aim/Objectives:

1. To explore students' perceptions of computer-based assessments.
2. To assess the perceived advantages and disadvantages of CBA among students.
3. To compare the perception of CBA among student from rural and urban areas.

**Methodology**  
This observational cross-sectional study was carried at LUMHS after approval from ERC No. LUMHS/REC/-508. The data was collected by providing the questionnaire to students in google forms. The link was sent in different WhatsApp groups of students. The catered data was analyzed on IBM, SPSS version 22.0. Pearson Chi Square test was used to check the association of CBA items. P values less than 0.05 were considered statistically significant. Bar and pie charts were used to give a graphical presentation of study outcomes.

### Results:

This study finds that out of total 285 undergraduates of first year till final year MBBS, and Allied sciences students (n=285), 88.99% students are satisfied and happy with implementation of this system of assessment but a few students (11.01%) complained about some technical issues, like software glitches and connectivity issue. These technical issues were resolvable. Some of the students, i.e., 12.02% from rural vicinities did not found this computer based system as user friendly, while 87.98% were satisfied with this new system. Majority of students i.e., 90.87% perceived it as more fair examination system. But being first time experience they were anxious.

**Conclusion:** This study concluded that from student perspective, computer based assessment is more user friendly and fair way of examination at LUMHS.

**Key words:** Assessment, Computer based examination, perception, students

## ICOHPE-2025-LUMHS

Title: Sleep and its impact on Academic Performance

Authors: Shaheer Suhail Memon<sup>1</sup>; Samreen Memon<sup>2</sup>; Hudebia Allah Buksh<sup>3</sup>

### Introduction:

Sleep is a natural body phenomenon in which the body and mind rests. It is widely believed to have an impact on the body's cognitive function, memory and concentration which directly impact a student's academics. The objective the study was aimed to investigate how a student's sleeping habits, quality and duration affects their academic performance in medical school.

### Methodology:

This cross-sectional study was conducted between May 2024 and July 2024 and focused on pre-clinical and clinical year MBBS students from different backgrounds studying in a public-sector university in Sindh, Pakistan. Students were asked to complete an electronic self-administered questionnaire that included their background information, including age, gender, and academic year of study. In addition, the Pittsburgh Sleep Quality Index (PSQI) was utilised, which evaluates the quality of sleep in the previous month by utilising a scoring system that considers sleep habits. Quantitative variables are reported as the mean  $\pm$  S.D., while qualitative variables are represented as frequencies and percentages. Chi-square test was used to determine statistical significance, and a p-value of less than 0.05 was considered.

### Results:

A total of 315 students participated in survey. Total 205 females, while 110 males responded. The age ranged between 18 to 30 years, with majority of respondents were aged between 20-24 years (82.5%). Students from Sindh, other provinces and countries participated in the study. Half of the total participants of this study were day scholars (51%). The students' educational level ranged between second year MBBS and Final Year MBBS. Almost 60% of the respondents reported poor quality of sleep with Mean  $\pm$  SD PSQI score  $6.82 \pm 3.38$ . The poor quality sleep is significantly associated with low academic performance ( $p < .001$ ).

Conclusion: The majority students show poor sleep quality regardless of academic year and residence, which has significant correlation with their academic performance.

*Key Words: Sleep quality; Academic performance; Undergraduate medical students*

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Barriers towards compliance of life style modification factors among hypertensive population of Thatta

## ABSTRACT

**INTRODUCTION:** Hypertension is among the prevalent non-communicable diseases (NCDs) acknowledged as a global public health concern, particularly in low- and middle-income countries (LMICs). Furthermore, in these LMICs, just one out of every three individuals is aware of their hypertension condition, and approximately 8% have their blood pressure effectively managed. The worldwide prevalence of hypertension stands at 22.1%.

**OBJECTIVE:** The study specific objectives included identifying the compliance of hypertension towards lifestyle modification and barriers (cultural and social) towards the compliance of hypertension.

**MATERIALS AND METHODS:** This cross-sectional study was conducted to the Hypertensive population of District Thatta. The sample size calculated was 260 participants. The sampling technique was simple random probability technique and approved by Ethical Review Committee. Data collection was done using a pre-tested questionnaire. The data was compiled with proper coding in Microsoft Excel and then further analyzed in Statistical Package for Social Sciences for Windows (SPSS) version 29.

**RESULTS:** The study revealed the compliance of hypertension in which respondent find it extremely difficulty to comply with physical activity and diet that is 44.2% and 60.4% respectively. While the good compliance towards medicine adherence that is 30.8% of participants. Moreover, the study also revealed cultural factors, particularly traditional dietary practices high in salt and spices, emerged as a major barrier, with 60.4% of participants reporting extreme difficulty in adhering to recommended dietary guidelines. Additionally, reliance on traditional remedies over prescribed medications was prevalent, further complicating adherence efforts. Gender discrimination affecting outdoor physical activities also played a notable role, impacting lifestyle compliance. Lastly, Social barriers, including work environment, social commitments, and financial constraints, further hindered the participants' ability to adhere to recommended lifestyle changes.

**CONCLUSION:** The study identified the good compliance of hypertensive patients in Thatta regarding, medication, while difficulty of compliance shown for physical activity and diet. It also highlighted significant cultural and social barriers impacting their adherence.

**KEYWORDS:** Hypertension, Lifestyle, Medicine, Diet, Physical Activity, Barriers

## ICOHPE-2025-LUMHS

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Title: Empowering Tomorrow's Healthcare Professionals: Blended Learning in Competency-Based Medical Education

### Background/Introduction/Objective:

Healthcare education is evolving, and Competency-Based Medical Education (CBME) is at the forefront of this transformation. Yet, traditional teaching methods often struggle to prepare students for real-world challenges. Our study explored whether blending online learning with hands-on workshops could bridge this gap and help medical students develop practical competencies more effectively.

### Methods:

We conducted a six-week blended learning program with 120 third-year medical students, selected via stratified random sampling. The program combined interactive online modules to strengthen theoretical foundations and practical workshops to build clinical skills. Data collection included pre- and post-program knowledge tests, Objective Structured Clinical Examinations (OSCE), and focus group discussions to capture student experiences. Quantitative data were analyzed using paired t-tests and ANOVA, while qualitative insights were extracted through thematic analysis.

### Results:

The results were promising. Students' knowledge improved significantly, with an average score increase of 15% ( $p < 0.001$ ), and clinical skills saw a 20% improvement in OSCE scores ( $p < 0.001$ ). Feedback revealed that students felt more engaged, confident in their decision-making, and better prepared for clinical challenges. However, some faced technological issues, and faculty training emerged as a crucial area for improvement.

### Conclusion & Recommendations:

Blended learning proved to be a powerful tool in CBME, enriching student learning experiences and competency development. To make the most of this approach, institutions should invest in robust technological infrastructure and comprehensive faculty training. As we move forward, further research should focus on understanding the long-term impact of blended learning and its adaptability across diverse educational contexts. This approach holds immense potential to reshape healthcare education and prepare future professionals for the dynamic demands of their field.

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**Title:** Diagnostic significance of serum microRNA in colorectal carcinoma: A systemic review

**Background:** Recent advancements have improved cancer detection methods. MicroRNAs play a crucial role in the early detection of colorectal cancer (CRC) as their expression is often altered in CRC. Specific miRNAs can act as cancer promoters or tumor suppressors, and their profiles in tissue or blood samples can serve as diagnostic biomarkers for CRC.

**Objective:** We aim to evaluate existing research on using plasma or serum-based miRNAs as biomarkers for diagnosing CRC.

**Methodology:** We conducted a systematic review using PubMed and ScienceDirect, identifying 2,603 articles. After screening and exclusions, 8 articles were included in the final analysis.  
**Results:** Eleven miRNAs were evaluated using qRT-PCR. Notably, miRNA-1290 exhibited high diagnostic accuracy.

**Conclusion:** Our review highlights the potential of microRNAs in blood samples for early CRC detection. MiRNA-based tests may offer improved sensitivity and specificity. High-risk patients can be screened for certain miRNAs via non-invasive methods, enabling early detection and improving treatment outcomes. This approach holds promise for enhancing CRC diagnosis and patient care.  
**Key Words:** colorectal carcinoma (CRC), microRNA, Diagnostic significance, Blood-Based biomarker

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Emergency Medicine

Technology in Health Professions Education

"RUSHing Knowledge: Integrating Rapid Ultrasound in Shock Evaluation (RUSH) for Emergency Medicine Education"

Abstract:

### Background:

Shock management in emergency medicine poses significant challenges due to the complexity of its causes and the limitations of traditional diagnostic methods. Delays in accurate diagnosis and intervention are linked to high mortality rates. At the Emergency Department (ED) of Liaquat University Hospital, the Rapid Ultrasound in Shock (RUSH) exam offers a structured, mnemonic-based ultrasound protocol (HI-MAP: Heart, Inferior Vena Cava, Morison's/FAST, Aorta, Pneumothorax) to enhance rapid evaluation and management of critically ill patients.

### Objective:

To assess the educational and clinical utility of the RUSH exam in improving diagnostic accuracy and guiding treatment decisions for shock in emergency settings, while training healthcare professionals in systematic ultrasound application.

### Methods:

This study involved applying the RUSH exam to patients presenting with undifferentiated hypotension in the ED. The protocol included echocardiographic assessments for pericardial tamponade and right ventricular failure, IVC evaluation for volume status, FAST for free fluid and haemothorax, aortic scanning for aneurysm, and lung ultrasound for pneumothorax. Portable ultrasound machines were used to complete the exam within two minutes. Simultaneously, healthcare providers underwent structured training on the RUSH protocol, including hands-on simulation and real-time application in clinical scenarios.

### Results:

The RUSH exam significantly improved the speed and accuracy of diagnosing shock causes, reducing time to intervention and enhancing patient outcomes. Post-training evaluations showed increased confidence and proficiency among emergency medicine trainees in using the RUSH protocol for clinical decision-making.

### Conclusion:

Integrating the RUSH exam into emergency medicine education and practice at Liaquat University Hospital has demonstrated dual benefits: enhanced patient care through rapid, accurate shock diagnosis and improved healthcare provider competency in point-of-care ultrasound techniques. This approach underscores the critical role of systematic training in bridging clinical and educational innovation for optimal patient outcomes.

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Emergency Medicine

Teaching and Learning

#### Abstract:

Impact of Intravenous Cannula Size and Access Methods on Resuscitation in Shocked Patients: A Quality Improvement Project at LUH Hyderabad

#### Introduction:

Effective resuscitation in shocked patients is critical in the Emergency Department (ED). At Liaquat University Hospital (LUH) Hyderabad, intravenous (IV) cannulation is performed by dispensers and Emergency Medical Technicians (EMTs). Cannula size and vascular access methods significantly impact outcomes, particularly in critically ill patients. This Quality Improvement (QI) project evaluates the effect of cannula size on shock resolution in the first hour and seeks to improve resuscitation outcomes by enhancing staff education and adherence to evidence-based protocols in the ED.

#### Objective:

To assess the relationship between IV cannula size, vascular access methods, and shock resolution within the first hour of presentation to the ED. The goal is to optimise resuscitation practices through targeted education, improving decision-making and patient outcomes.

#### Methods:

This QI project follows the PDSA cycle to improve IV cannulation procedures in the ED, with a focus on health professions education.

**Plan:** Define data collection parameters: cannula size, vascular access methods (peripheral, USS-guided, CVC), first attempt success, time to access, and fluid volumes.

**Do:** Collect baseline data on patients with shock, categorising shock type, and recording cannulation details, resuscitation methods, and clinical monitoring during the first hour. Simultaneously, educate ED staff on optimal cannula selection and access methods based on evidence.

**Study:** Analyse correlations between cannula size, vascular access success, and shock resolution (heart rate, BP, SpO<sub>2</sub>, GCS) during the first hour.

**Act:** Implement improved cannula selection protocols and more appropriate access techniques, based on initial findings. Offer continuous training to improve staff skills in vascular access.

#### Outcome Measures:

**Primary:** Improvement in shock resolution (vital signs) after the first hour based on cannula size and resuscitation practices, reflecting the impact of evidence-based education.

**Secondary:** First attempt success rate, vascular access methods, fluid resuscitation effectiveness, and adverse events. Evaluation of training impact on team performance will also be considered.

#### Conclusion:

This QI project aims to enhance shock resolution by optimising vascular access techniques and cannula size selection. Improving education for ED staff ensures better patient outcomes and provides a model for integrating health professions education into clinical practice, supporting continuous development of training protocols.

## ICOHPE-2025-LUMHS

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Emergency Medicine

Technology in Health Professions Education

**TITLE: "Transforming Emergency Airway Management Education: Integrating Point-of-Care Ultrasound for Skill Enhancement and Patient Safety"**

**Background/Introduction/Objective:**

Endotracheal intubation (ETI) is a critical life-saving procedure, particularly in the Emergency Department (ED). Accurate and timely verification of endotracheal tube (ETT) placement is vital to avoid life-threatening complications. At Liaquat University of Medical and Health Sciences (LUMHS), traditional verification methods such as clinical examination and portable chest X-ray face challenges due to oral debris, lack of capnography, and equipment constraints. This project aims to integrate Point-of-Care Ultrasound (POCUS) into emergency airway management training for Postgraduate Emergency Medicine (PG EM) trainees to enhance accuracy, speed, and patient safety.

**Methods:**

This quality improvement initiative employed a structured training program featuring simulation-based learning, real-time practice, and continuous feedback. Baseline data on traditional ETT verification methods (time to confirmation, accuracy, and patient outcomes) were collected over four weeks. POCUS implementation included training on ultrasound techniques and interpretation of lung sliding and comet-tail artifacts for ETT placement confirmation. Data were evaluated using Run Charts, Process Mapping, and Pareto Analysis to assess trends, workflow integration, and proficiency development.

**Results:**

Preliminary findings demonstrated a significant reduction in time to ETT confirmation with POCUS compared to clinical examination and portable chest X-ray. Misplaced ETT incidences decreased, and patient safety indicators such as oxygen saturation levels and reintubation rates improved. PG EM trainees reported increased confidence and proficiency in airway management using POCUS.

**Conclusion & Recommendations:**

Integrating POCUS training into emergency airway management not only enhances patient safety but also serves as a robust model for skill development in Health Professions Education (HPE). This approach underscores the importance of evidence-based educational strategies to empower healthcare professionals and optimize critical care delivery. Further studies are recommended to evaluate long-term impacts on trainee competency and patient outcomes.



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Marker for CRC

Diagnostic significance of serum microRNA in colorectal carcinoma: a systematic review.

#### Background

Among cancers, colorectal cancer ranks third in frequency and second in mortality, necessitating early detection and diagnosis. While colonoscopy is a common but invasive method, non-invasive techniques have demonstrated greater specificity and sensitivity. MicroRNAs (miRNAs) hold promise for early diagnosis.

#### Objective

To evaluate existing research on the use of plasma- or serum-based miRNAs as biomarkers for diagnosing colorectal carcinoma (CRC). This study aims to assess how effectively miRNAs in plasma or blood function as biomarkers for diagnosing and detecting early colorectal cancer.

#### Methodology

We conducted a systematic review following PRISMA guidelines, using PubMed and ScienceDirect to identify relevant articles published between 2012 and 2024 on the significance of specific miRNAs in diagnosing colorectal neoplasms. Initially, 2,603 articles were identified: 103 from PubMed and 2,500 from ScienceDirect. After screening and removing duplicates, eight articles were considered for final analysis. These studies varied in their design, sample size, population characteristics (age, sex, ethnic background), experimental techniques, and patterns of miRNA regulation.

#### Results

A total of 11 miRNAs were found to be significantly dysregulated. Of these, 10 were upregulated, while 1 was downregulated. Using a panel of these 11 miRNAs, the highest area under the curve (AUC) of 1.0 was achieved, with 100% sensitivity and specificity.

#### Conclusion

This review highlights serum-derived miRNAs as promising non-invasive biomarkers for detecting CRC. They offer potential for early diagnosis without requiring invasive procedures

## ICOHPE-2025-LUMHS

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Internal Medicine

Teaching and Learning

### Clinical Efficacy and Safety of Edaravone in Acute Ischemic Stroke Therapy: A Systematic Review and Updated Meta-Analysis

#### Introduction

Acute ischemic stroke (AIS) is a significant cause of death and disability worldwide. Edaravone, a neuroprotectant, is a free radical scavenger, mitigating neural and vascular damage. Edaravone inhibits peroxidation systems and lipid pathways. However, despite its potential, the impact of Edaravone on ischemic stroke has not been extensively studied in the literature. The relatively limited number of studies leaves a gap in understanding its full therapeutic value and safety. This meta-analysis aimed to assess the efficacy and safety of Edaravone in AIS patients by pooling all the studies conducted to date.

#### Objective

To validate the hypothesis that Edaravone increases functional outcomes in patients with AIS.

#### Methods

We conducted a comprehensive literature review to identify relevant studies across major bibliographic databases and registries, including Medline, Scopus, and ClinicalTrials.gov. All studies that compared Edaravone with a placebo/standard treatment without an active comparator were included. Case reports, animal studies, and review articles were excluded. The outcomes included a three-month functional status measured by a modified Rankin scale (mRs), the incidence of in-hospital intracranial hemorrhage, and three-month mortality. Dichotomous outcomes were pooled using the odds ratio (OR) with a 95% confidence interval (CI) using the Der Simonian-Laird random-effects model and forest plots were generated. Statistical significance was set at  $p < 0.05$ . The risk of bias in the studies was assessed using two different tools. For the randomized controlled trials (RCTs), the Risk of Bias 2 (RoB 2) tool was used. For the observational studies, the Newcastle-Ottawa Scale was employed. The study protocol was registered with the International PROSPERO Registry (CRD42024522781). No funding was procured at any stage during this review.

#### Results

An initial search yielded 634 potentially relevant articles. However, only 18 studies were included in the final review. Edaravone treatment was associated with improved excellent functional outcomes (mRs  $\leq 1$ ) (OR=1.47, 95% CI: 1.21-1.79,  $p=0.05$ ,  $I^2=51\%$ ) improved good functional outcomes (mRs  $\leq 2$ ) (OR=1.58, 95% CI: 1.311-1.91,  $p=0.14$ ,  $I^2=37\%$ ) at 90 days and a significant reduction in mortality (OR=0.63, 95% CI: 0.48, 0.82;  $p=0.18$ ;  $I^2=32$ ). No significant difference in intracranial hemorrhage was observed (OR=1.09, 95% CI: =0.52-2.29,  $p=0.00001$   $I^2=94\%$ ).

#### Conclusion

This meta-analysis demonstrates the efficacy of Edaravone in improving functional outcomes and reducing mortality in AIS. However, the findings regarding intracranial hemorrhage are inconclusive due to high heterogeneity. Further randomized controlled trials are warranted to evaluate the robustness of these results.

Keywords: Acute ischemic stroke; stroke; mortality; outcomes

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SAJAN SARANG

MUHAMMAD ILYAS SIDDIQUI, KANWAL NAZ

Public Health

### Quality of Life

**Aims:** This study investigates the factors influencing the quality of life (QoL) of children with beta-thalassemia major ( $\beta$ -TM) in District Tharparkar, Pakistan, focusing on demographic, socio-economic, educational, emotional, and social aspects.

**Methods:** A descriptive cross-sectional research was carried out to evaluate children's quality of life (QoL) with transfusion-dependent beta-thalassemia major ( $\beta$ -TM) in District Tharparkar. A total of 190 children, aged 6 months to 18 years, were selected using non-probability purposive sampling. Data were gathered through the WHOQOL-BREF questionnaire, which assessed physical health, psychological well-being, social relationships, and environmental factors. Information on demographics, educational status, and healthcare utilization was also collected. With SPSS software version 25.0, statistical analysis was carried out. To generate descriptive statistics. Ethical approval was obtained, and written informed permission was achieved from each participant's parents or guardians. **Findings:** The median age at diagnosis and initiation of treatment was 6 months. The majority of participants were male (58.9%), and most children (74.7%) were not attending school. Emotional wellbeing varied, with a significant portion of children reporting neutrality or unhappiness, and anxiety was the most prevalent psychological issue. Social discrimination affected 63.6% of children. Financial support was available to 92.1% of families, but school support and special accommodations were limited (24.2%). Children receiving weekly therapy reported better social relationships, while those attending school had higher environmental QoL scores. **Conclusion:** The study highlights significant challenges faced by children with  $\beta$ -TM in District Tharparkar, including educational disruption, limited emotional and school support, and social discrimination. Addressing these issues through enhanced educational policies, psychological support, and reduced stigma could improve the overall quality of life for these children. Future interventions should focus on integrating affected children into educational systems and providing comprehensive support services.

**Keywords:** Beta-thalassemia major, Quality of Life, Education, Emotional Wellbeing, Social Discrimination, Financial Support

## ICOHPE-2025-LUMHS

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MBBS, Community Medicine

Assessment and Evaluation

Title: PATIENT SAFETY PERCEPTION AMONG HEALTH CARE PROFESSIONALS OF MILITARY HOSPITAL LAHORE, PAKISTAN

**Aims:** This study aimed to evaluate four different factors regarding perception of patient safety among healthcare individuals; the importance of patient safety, the need to address patient safety, perceptions about medical errors and reporting, and the need to address patient safety issues.

**Methodology:** This analytical cross-sectional study was conducted in Military Hospital Lahore from January 2023 to April 2023. The target population of this study was clinical staff (health care providers who have direct contact with patients). Convenient sampling was used to recruit respondents in the study. Respondents comprised clinical staff (doctors and nurses). Sample size was 376. Sample size was calculated taking population proportion 42% ( $p=0.42$ ), margin of error 0.05 at 95% confidence level.

**Findings:** Among participants, 216 (57.4%) were females & 160 (42.6%) males with age range 20-60 years (mean  $29.9 \pm 7.60$ ), doctors were 315 (83.08%) and nurses were 61 (16.2%).

It was found out that three dimensions recorded i.e., importance of patient safety, perceptions about medical errors, perception about education of patient safety recorded high positive response rates ( $\geq 70\%$ ) that is 85.2%, 70.7% & 84.2% respectively. One dimension i.e., need to address patient safety issues recorded low positive response rate i.e., 22.5%.

The highest mean score i.e;  $29.83 \pm 4.77$ , was observed in the domain of perception about education of patient safety followed by importance of patient safety i.e.,  $17.30 \pm 2.99$ , while lowest mean score in other two domains of need to address patient safety issues & perceptions about medical errors.

**Conclusion:** This study discusses findings of patient safety perception among health care professionals of Military Hospital, Lahore. Most doctors and nurses of Military hospital, Lahore understand the importance of training and education about patient safety.

**Keywords:** patient safety, clinical staff, perception, health care, hospital

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LUMHS

Dr Kabira Memon

Dr Rehmatullah, Dr Danish, Dr Mahmood Soomro

Emergency Medicine

Technology in Health Professions Education

"Enhancing Trauma Care Education through Quality Improvement: Integrating Ocular Ultrasonography for Early Detection of Elevated ICP"

Background:

Traumatic brain injury (TBI) is a leading cause of morbidity and mortality worldwide, with elevated intracranial pressure (ICP) being a critical complication requiring prompt detection. Traditional invasive ICP monitoring, though accurate, is often unfeasible in low-resource settings due to logistical and financial constraints. At Liaquat University Hospital (LUH), Hyderabad, ocular ultrasonography offers a non-invasive, accessible alternative by measuring optic nerve sheath diameter (ONSD) for early detection of elevated ICP in TBI patients.

Objective:

The primary objective is to evaluate the diagnostic accuracy of ocular ultrasonography, including sensitivity, specificity, positive predictive value (PPV), and negative predictive value (NPV), for detecting elevated ICP. A secondary objective is to assess the feasibility of integrating this technology into routine emergency practice at LUH, focusing on time efficiency, operator variability, and training outcomes.

Methods:

This quality improvement initiative utilized ocular ultrasonography to measure ONSD in TBI patients, with diameters exceeding 6 mm indicating elevated ICP. Emergency department staff underwent standardized training on ultrasonography protocols to ensure consistent and accurate measurements. Data on diagnostic accuracy, time efficiency, and interobserver reliability were collected and analyzed during Plan-Do-Study-Act (PDSA) cycles.

Results:

Preliminary findings indicate that ocular ultrasonography demonstrates high diagnostic accuracy for detecting elevated ICP, with significant reductions in time compared to invasive monitoring. Staff training improved interobserver reliability and confidence in using ultrasonography as a diagnostic tool. The intervention proved feasible, cost-effective, and patient-friendly within the constraints of a low-resource emergency setting.

Conclusion:

Integrating ocular ultrasonography into TBI management and training programs at LUH enhances early detection of elevated ICP while promoting innovative, non-invasive diagnostic practices. This approach aligns with the principles of Health Professions Education by fostering skill development, improving clinical decision-making, and optimizing patient care. Sustained training and protocol standardization can ensure the scalability and long-term success of this initiative across similar healthcare settings.

## ICOHPE-2025-LUMHS

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Liaquat University of Medical and Health Sciences (LUMHS)

### Title

Prevalence and Severity of Hypokalemia in Patients with Diabetic Ketoacidosis (DKA) Presenting to the Emergency Department

### Objective

Diabetic ketoacidosis (DKA) is a life-threatening hyperglycemic emergency causing severe metabolic derangements, including hypokalemia, which can worsen patient outcomes. Timely identification and management of hypokalemia are essential for improving treatment outcomes. This study aimed to determine the prevalence and severity of hypokalemia in patients with DKA presenting to the emergency department.

### Methods

A cross-sectional study was conducted at the Department of Emergency Medicine, Jinnah Postgraduate Medical Centre, Karachi, from November 2022 to April 2023. Using consecutive sampling, 97 patients aged 18-65 years with blood glucose levels  $\geq 250$  mg/dL at presentation, meeting the diagnostic criteria for DKA, were included. Data on potassium levels were analyzed to categorize hypokalemia into mild, moderate, and severe. Statistical analysis was performed to evaluate associations with gender and insulin use.

### Results

Hypokalemia was prevalent in 53.61% of patients (n=52). Among these, 39.18% had mild hypokalemia, 11.34% had moderate hypokalemia, and 3.09% had severe hypokalemia. Conversely, 45.36% of patients had normal potassium levels, and only 1.03% presented with hyperkalemia. Among hypokalemic patients, 53.16% were using insulin (p=0.082, not significant). Gender-wise, 53.57% of males and 42.31% of females experienced hypokalemia (p=0.42, not significant).

### Conclusion & Recommendations

The study revealed a significant prevalence of hypokalemia (53.61%) in DKA, with 3.1% experiencing severe hypokalemia. These findings underscore the importance of assessing serum potassium levels before initiating DKA treatment, as recommended by the American Diabetes Association, to prevent adverse outcomes. Educational efforts should focus on integrating these practices into emergency department protocols.

Ethical approval by IRB JPMC, Karachi

<https://doi.org/10.54393/pjhs.v5i09.2206>

Title: Sleep and its impact on Academic Performance

Authors: Shaheer Suhail Memon<sup>1</sup>; Samreen Memon<sup>2</sup>; Hudebia Allah Buksh<sup>3</sup>

#### Introduction:

Sleep is a natural body phenomenon in which the body and mind rests. It is widely believed to have an impact on the body's cognitive function, memory and concentration which directly impact a student's academics. The objective the study was aimed to investigate how a student's sleeping habits, quality and duration affects their academic performance in medical school.

#### Methodology:

This cross-sectional study was conducted between May 2024 and July 2024 and focused on pre-clinical and clinical year MBBS students from different backgrounds studying in a public-sector university in Sindh, Pakistan. Students were asked to complete an electronic self-administered questionnaire that included their background information, including age, gender, and academic year of study. In addition, the Pittsburgh Sleep Quality Index (PSQI) was utilised, which evaluates the quality of sleep in the previous month by utilising a scoring system that considers sleep habits. Quantitative variables are reported as the mean  $\pm$  S.D., while qualitative variables are represented as frequencies and percentages. Chi-square test was used to determine statistical significance, and a p-value of less than 0.05 was considered.

#### Results:

A total of 315 students participated in survey. Total 205 females, while 110 males responded. The age ranged between 18 to 30 years, with majority of respondents were aged between 20-24 years (82.5%). Students from Sindh, other provinces and countries participated in the study. Half of the total participants of this study were day scholars (51%). The students' educational level ranged between second year MBBS and Final Year MBBS. Almost 60% of the respondents reported poor quality of sleep with Mean  $\pm$  SD PSQI score  $6.82 \pm 3.38$ . The poor quality sleep is significantly associated with low academic performance ( $p < .001$ ).

Conclusion: The majority students show poor sleep quality regardless of academic year and residence, which has significant correlation with their academic performance.

*Key Words: Sleep quality; Academic performance; Undergraduate medical students*

## ICOHPE-2025-LUMHS

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Comprehensive Care

Teaching and Learning

Title: Implementation and Assessment of a Comprehensive Care Teaching Model in Dental Education

### Background/Objective:

The Comprehensive Care Dentistry (CCD) teaching model was developed to address gaps in dental education, particularly in integrating clinical, managerial, and professional skills. This study evaluates the effectiveness of the model in enhancing final-year dental students' clinical and professional competencies at Liaquat University of Medical & Health Sciences (LUMHS), focusing on preparedness for modern dental practice.

### Methods:

The study employed a competency-based education framework combined with workplace-based learning principles. Final-year BDS students at LUMHS participated in clinical rotations in the Comprehensive Care Clinic (CCC), engaging in treatment planning, patient management, and interdepartmental collaboration under faculty supervision. Structured feedback, rubric-based evaluations, and the Dental Undergraduates Preparedness Assessment Scale (DU-PAS) were utilized to measure competency development. A comparative analysis was conducted with students from institutions without CCC exposure.

### Results:

Of the 100 students who completed the CCC rotation, 63 provided feedback, reporting significant improvements in treatment planning, patient communication, and technical proficiency. Comparative analysis revealed that LUMHS students outperformed their peers in advanced clinical competencies, such as prescribing dental radiographs and performing endodontic procedures. Foundational skills were consistent across institutions, but CCC students exhibited superior professional behaviors and decision-making capabilities. Self-reported competencies highlighted gaps in managing complex cases, emphasizing the need for tailored interventions.

### Conclusion & Recommendations:

The CCC teaching model significantly enhanced students' readiness for independent practice by integrating clinical, managerial, and professional domains. The structured feedback mechanism and real-world clinical exposure fostered skill development and confidence. Scaling the CCC model across institutions and conducting longitudinal studies are recommended to further validate its impact and address identified gaps.

Ethical Approval Number: Not applicable.



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LUMHS

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Dr Hina Waghella, Dr Mahmmod Soomro

Emergency ICU

Assessment and Evaluation

"Bridging Gaps in Critical Care: Insights from an EICU Clinical Audit at LUMHS"

#### Background:

The Emergency Intensive Care Unit (EICU) at Liaquat University Hospital (LUMHS) plays a pivotal role in managing critically ill patients, including trauma cases, respiratory failure, poisoning, and multi-organ failure (MOF). Efficient care delivery and adherence to protocols, such as the six-hour transfer policy, are crucial for optimal outcomes. This clinical audit evaluates patient outcomes, interventions, and process efficiency to identify gaps and opportunities for quality improvement in critical care.

#### Objectives:

This retrospective audit aims to:

Assess the primary reasons for EICU admissions, including trauma, respiratory failure, poisoning, and MOF

Evaluate mortality rates, complication rates, and length of stay (LOS).

Examine interventions such as mechanical ventilation, sedation, and renal support.

Analyse success rates in airway management, including intubation and extubation.

Review the timeliness and appropriateness of patient transfers within the six-hour policy.

#### Methods:

Data was collected from EICU records over three months (August-December 2024) using a standardized data collection sheet. Variables included patient demographics, primary diagnosis, interventions, LOS, and transfer details. Key performance indicators, such as mortality, complications, and transfer efficiency, were benchmarked against national standards to assess alignment with best practices.

#### Results:

Preliminary findings highlight:

Mortality and complication rates compared to national benchmarks.

Success rates of airway management, including extubation and re-intubation.

Efficiency in meeting the six-hour transfer policy, identifying delays or barriers.

Interventions provided and their impact on outcomes, particularly for trauma and critically ill medical patients.

#### Conclusion:

This audit provides actionable insights into clinical outcomes and operational processes in the EICU, emphasizing areas for quality improvement such as transfer protocols, airway management, and intervention effectiveness. By aligning with national benchmarks and best practices, this study underscores the importance of evidence-based care and continuous education for healthcare providers to improve patient outcomes and operational efficiency in critical care.

## ICOHPE-2025-LUMHS

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LUMHS

Dr Falak Islam

Dr Hina Waghella, Dr Kabira Memon, Dr Mahmood Soomro

Emergency department

Teaching and Learning

Abstract:

Audit of DKA Management in the Emergency ICU: Data Collection Proforma and Clinical Outcomes

Introduction:

Diabetic Ketoacidosis (DKA) is a life-threatening complication of diabetes, often requiring intensive management in the emergency ICU. Adherence to evidence-based protocols is essential for improving clinical outcomes. This audit aimed to evaluate the management of DKA patients in the emergency ICU, assess adherence to evidence-based protocols, and measure clinical outcomes, including bicarbonate improvement, blood glucose reduction, and progression to more severe states such as ventilator use or mortality.

Methods:

A Data Collection Proforma was developed to systematically capture essential clinical, diagnostic, and therapeutic parameters for adult patients with DKA in the emergency ICU. The proforma includes sections for patient demographics, clinical presentation, vital signs, diagnostic lab results (blood glucose, pH, electrolytes), management interventions (fluid resuscitation, insulin infusion, bicarbonate therapy, ventilator use), and complications (e.g., cerebral oedema, hypokalaemia). Key care goals such as bicarbonate improvement and blood glucose reduction were measured alongside clinical outcomes. Data were collected to assess protocol adherence and evaluate outcomes, including discharge to the ward, mechanical ventilation, and mortality.

Results:

Implementation of the proforma led to improved consistency in data collection and adherence to protocols. Key outcomes such as fluid resuscitation volumes, insulin infusion rates, bicarbonate levels, and ventilator use were effectively monitored. Adherence to protocols correlated with improved bicarbonate levels, reduced blood glucose, fewer complications, and shorter ICU stays. Patient outcomes, including discharge to the ward, ventilator use, and mortality, were also positively influenced by protocol adherence, with lower mortality rates and reduced need for ventilatory support. Early detection of complications like cerebral oedema and hypokalaemia led to timely interventions.

Discussion:

The Data Collection Proforma proved to be an effective tool for auditing DKA management in the emergency ICU, promoting adherence to evidence-based protocols. This audit highlighted the importance of critical interventions such as fluid balance, insulin administration, bicarbonate therapy, and ventilator use in optimising clinical outcomes. Additionally, the process of auditing and protocol adherence reinforced the role of health professions education in improving clinical practice. By integrating such audits into continuous quality improvement efforts, both clinical outcomes and staff competency in DKA management can be enhanced, offering a framework for future research and training initiatives.

# A Qualitative Study of Undergraduate and Postgraduate Students' Perceptions and Experiences with Chat-GPT in Medical Education.

Prof. Asadullah Makhdoom<sup>1</sup> & Dr. Hudebia Allah Buksh<sup>2</sup>

1. Professor of Orthopedic Surgery & MHPE Scholar, Liaquat University of Medical & Health Sciences, Jamshoro.
2. Assistant Professor & In-charge, Department of Medical Education, Liaquat University of Medical & Health Sciences, Jamshoro.

## ABSTRACT

**Background:** The rise of artificial intelligence (AI) has transformed several sectors, including medical education

**Objective:** ChatGPT, an advanced AI-based chatbot, has emerged as a game-changing tool in medical education, providing personalised learning experiences, improving clinical reasoning, and promoting increased communication abilities.

**Method & materials:** This study investigates the perspectives and experiences of undergraduate and postgraduate medical students who use ChatGPT as a learning tool. A qualitative, cross-sectional study was carried out at the Department of Orthopaedic Surgery at LUMHS, with students in their clinical years.

ChatGPT (version 4.0) created genuine medical case situations, and users were requested to use the tool for activities such as history collecting, differential diagnosis, and therapy.

Data was gathered using pre- and post-session interviews, recorded and transcribed verbatim, and analysed with SPSS version 21.

**Results:** The findings aim to analyse ChatGPT's usefulness in improving clinical reasoning, diagnostic abilities, and patient communication, as well as its function in augmenting standard medical curriculum.

**Conclusion:** This study provides essential insights for incorporating AI-based technologies into medical education, bridging curricular gaps, and encouraging future healthcare professionals to use novel learning approaches.

**Keywords:** AI, ChatGPT, Medical Education, Learning Tools, Clinical Reasoning, Communication Skills.

## Emotional Intelligence: The Antidote to Burnout Among Educators of Public Medical University.

Dr. Sadat Memon<sup>1</sup>, Dr. Hudebia Allah Baksh<sup>2</sup>

**BACKGROUND:** Emotional intelligence (EI) plays a crucial role in professional success and well-being, especially in high-stress fields like medicine. Medical teachers in clinical and basic science disciplines face unique challenges, such as heavy workloads and balancing teaching, research, and clinical duties. These stressors can lead to burnout, characterized by emotional exhaustion, depersonalization, and reduced personal accomplishment. Despite its importance, the relationship between EI and burnout in medical educators, especially public sector universities, remains underexplored.

**OBJECTIVES:** It compares EI and burnout levels between clinical and basic medical science teachers and examine the relationship between EI and burnout in both groups.

**METHODOLOGY:** This comparative, cross-sectional study used non-probability convenience sampling with 246 participants. Data was collected via the Trait Emotional Intelligence Questionnaire (TEIQue-SF) and Maslach Burnout Inventory (MBI). Analysis was performed using SPSS 23.0, with descriptive statistics, numerical data as mean  $\pm$  SD and categorical data as frequencies and Pearson's correlation to assess the relationship between EI and burnout, setting significance at  $\leq 0.05$ .

**RESULTS:** Clinical Teachers Group (47 males, 76 females) and Basic Science Teachers Group (37 males, 86 females) had mean ages of  $37.3 \pm 6$  and  $47 \pm 1$  years, respectively. The EI Subscale differences were noted in Self-control and Sociability ( $P < 0.001$ ). Burnout scores differed significantly across all subscales, with Clinical Teachers scoring higher ( $P < 0.001$ ). Pearson correlation analysis indicated a strong negative relationship between EI and burnout ( $r = -0.701$ ,  $P < 0.001$ ), suggesting higher EI is associated with lower burnout levels.

**CONCLUSION:** The study found a significant inverse relationship between EI and burnout in medical teachers. While overall EI scores were similar, Clinical Teachers reported higher burnout scores, particularly in emotional exhaustion and depersonalization, highlighting the need for interventions to boost EI and reduce burnout.

**Title:**

Burnout and Its Associated Factors in Postgraduate Medical Residents

**Authors:**

Dr. Akbar Gohar Abro<sup>1</sup> & Dr. Hudebia Allah Buksh<sup>2</sup>

**Background:** Burnout is a growing concern among postgraduate medical residents due to the demanding nature of their training and clinical responsibilities. This study aims to determine the prevalence of burnout and its associated factors among postgraduate medical residents at Liaquat University of Medical & Health Sciences (LUMHS), Jamshoro, Pakistan. The objective of study was to assess the prevalence of burnout among postgraduate medical residents and the associated factors contributing to burnout.

**Methods:** This observational, cross-sectional study was conducted at LUMHS, Jamshoro, over six months. A total of 96 postgraduate medical residents aged 25-40 years were selected through non-probability consecutive sampling. Data were collected using a structured questionnaire, including the Maslach Burnout Inventory (MBI). Burnout levels were categorized into low, moderate, and high based on emotional exhaustion, depersonalization, and personal achievement scores. Sociodemographic variables and work-related factors were also analyzed. Data were analyzed using SPSS v. 25.0, with qualitative variables expressed as frequencies and percentages and quantitative data as means and standard deviations. A chi-square test was applied, with a significance level of  $p \leq 0.05$ .

**Results:** The prevalence of burnout was 27.08% (high level) among the residents. Moderate burnout was observed in 41.67% of participants, while 31.25% reported low burnout. Emotional exhaustion scores revealed 23.96% of residents experienced high burnout in this domain. Depersonalization was high in 16.67%, while personal achievement burnout was significant in 41.67%. Factors such as gender, socioeconomic status, residency year, and workload significantly influenced burnout levels ( $p \leq 0.05$ ). Urban residents (66.67%) and those in middle socioeconomic status (57.29%) were predominant in the sample.

**Conclusion:** Burnout is a prevalent issue among postgraduate medical residents at LUMHS, with moderate to high levels observed in a significant proportion. Sociodemographic and work-related factors, including workload and inadequate support systems, contribute to burnout. Strategies focusing on mental health support, workload management, and fostering a positive workplace atmosphere are recommended to mitigate burnout and improve residents' well-being.

**Keywords:** *Burnout, Maslach Burnout Inventory, Emotional Exhaustion, Depersonalization, Personal Achievement, Postgraduate Medical Residents.*

1. Dr. Akbar Gohar Abro  
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ABSTRACT-01

REVOLUTIONISING RESIDENCY EDUCATION IN INTERNAL MEDICINE: A TWO-DECADE REVIEW  
OF DEVELOPMENTS, OBSTACLES, AND ADVANCEMENTS

FARHEEN QADEER, MUMTAZ ALI LAKHO, KHALIL AHMED SHAIKH,  
MUHAMMAD IQBAL SHAH, SYED ZULFIQUAR ALI SHAH, NUSRAT NISAR, HIFZA

**BACKGROUND:** During two decades, the program of internal medicine utilized several teaching tools to enhance student competence. These initiatives aim to enhance residents' clinical proficiency, assessment outcomes and pedagogical abilities.

**OBJECTIVE:** To assess the impact of educational interventions in internal medicine residency training programs on student performance, including as clinical competence, teaching skills, and achievement in postgraduate exams.

**METHODOLOGY:** The review focused on studies that assessed student outcomes after educational learning in internal medicine training. Measures used included a curriculum, quality work, work hours, learning options, and facilitations. The results were evaluated by independent knowledge, assessments and examination success rates.

**RESULTS:** The confidence and learning skills of internal medicine residents shown improvement and knowledge improvements via structural program focused on quality education. The quality improvement tools validate these results, indicating reliability. The pass rates for postgraduate examinations markedly improved after the implementation of proper interactive ward rounds, hands-on workshops, simulation training, and problem based learning, small group learning with different tasks, morning meeting and journal clubs that enhance the knowledge, competencies, and professional behaviour of residents.

**CONCLUSION:** The use of competency based education, adapted learning experiences, and teaching skills has enhanced the internal medicine training.

**KEYWORDS:** Teaching skills, Internal medicine training, clinical competence and postgraduate examinations.

ABSTRACT-02

FOSTERING SCIENTIFIC BACKING AND COMPETENCE: THE EXPERIENCE OF UNDERGRADUATE  
MEDICAL STUDENT IN MEDICINE WARDS

HIFZA, MUHAMMAD KASHIF SHEIKH, ABDUL GHANI RAHIMOON, FARHEEN QADEER,  
SYED ZULFIQUAR ALI SHAH, SYED JAHANGHIR, NUSRAT NISAR, SAREENA

**BACKGROUND:** Final-year MBBS students learn clinical skills, diagnostic argumentation, and patient care via ward teaching and bedside rounds. Understanding students' views on various teaching approaches is essential for improving medical education.

**OBJECTIVE:** This abstract reviews research from 2000 to 2020 that examined final-year MBBS students' input on ward teaching and bedside rounds to identify clinical education's strengths, flaws, and opportunities for improvement.

**METHODOLOGY:** A review of literature examined final-year medical students' views on ward teaching and bedside learning. The domain concentrated were the usefulness of various strategies in teaching clinical abilities, communication, and patient care, as well as hurdles and improvements.

**RESULTS:** Students liked bedside teaching for clinical skills and interaction with patients. There were complaints about recalcitrant patients, limited educational time, and inadequate individual attention during rounds. Bedside rounds were preferred over conference room discussions, and communication, counseling, and medical ethics were highlighted. Patient availability and teacher engagement were highlighted as barriers, along with faculty development and institutional changes to improve learning.

**CONCLUSION:** Bedside rounds and ward teaching are seen by final-year MBBS students as important learning strategy, and these instructional strategies may become more successful and better prepare students for clinical practice.

**KEYWORDS:** Ward learning, bedside teaching and student feedback.

ABSTRACT-03

A PROBLEM-BASED LEARNING APPROACH TO IMPROVE CRITICAL ABILITY OF MEDICAL STUDENTS

SAREENA, IMRAN KARIM, MUHAMMAD KASHIF SHEIKH, FARHEEN QADEER,  
SYED ZULFIQUAR ALI SHAH, KHALIL AHMED SHAIKH, NUSRAT NISAR, HIFZA

**BACKGROUND:** Medical education is increasingly using Problem-Based Learning (PBL) to improve MBBS Students' analytical thinking, ability to resolve problems, and autonomy in learning. PBL improves learning outcomes compared to lecture-based learning (LBL) in many studies.

**OBJECTIVE:** This analysis examines how PBL affects MBBS students' learning environments and results, focusing on critical thinking, problem-solving, and student perspectives.

**METHODOLOGY:** A thorough literature search found medical student PBL-LBL studies. Select studies were examined to see whether PBL improves critical thinking, problem-solving, and students' educational experiences.

**RESULTS:** The evidence shows that PBL enhances medical students' problem-solving and analytical skills. The prior research found that PBL enhanced clinical reasoning and problem-solving whereas traditional education improved topic knowledge. It has been observed that PBL generates a more pleasant learning environment than LBL, as evidenced by higher scientific scores.

**CONCLUSION:** PBL is an effective teaching approach and helps MBBS students strengthen their capacity for analytical thinking and problem-solving and may provide a more engaging and focused learning environment for clinical practice.

**KEYWORDS:** Problem based learning, Learning Outcomes and Lecture-based learning



ABSTRACT-04

A COMPREHENSIVE SURVEY ON THE SIGNIFICANCE OF ARTIFICIAL INTELLIGENCE IN HEALTH SCIENCES

FARHEEN QADEER, NUSRAT NISAR, SYED ZULFIQUAR ALI SHAH,  
MUMTAZ ALI LAKHO, IMRAN KARIM, SYED JAHANGHIR, TEESHA, HIFZA

**BACKGROUND:** Healthcare and the medical profession are being increasingly influenced by artificial intelligence (AI), which is delivering resources that enhance clinical decision-making and learning. It is imperative to comprehend the influence of AI incorporation on the learning outcomes of medical students in order to develop effective curricula.

**OBJECTIVE:** This meta-analysis assesses the influence of AI-driven educational interventions on medical students' knowledge, abilities, and attitudes, with the objective of guiding successful curricular integration techniques.

**METHODOLOGY:** A comprehensive review and meta-analysis were performed, evaluating papers that examined AI uses in medical science. The selection criteria were studies that looked at AI-driven teaching tools and how they affected medical students' learning results. Data were obtained and processed to determine the overall impact magnitude.

**RESULTS:** The study comprised several studies demonstrating that AI-driven interventions greatly increase medical students' knowledge retention, practical abilities, and confidence. It has been observed that use of AI-based simulations improved knowledge retention by thirty-five percent and their practical skills by forty percent. Furthermore, students expressed positive attitude towards AI, recognizing its ability to reduce medical errors and improve decision-making accuracy.

**CONCLUSION:** AI in the medical field helps students enhance their knowledge, skills, and confidence.

**KEYWORDS:** Machine learning, Artificial intelligence and educational technology.



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[www.lumhs.edu.pk/icohpe](http://www.lumhs.edu.pk/icohpe)