

Dr. Sama Mukhtar

Biographical Information:

Primary Office: Department of Emergency Medicine,
Indus Hospital and Health Network,
Plot C-76, Sector 31/5, Opposite Korangi
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Academic Qualifications

| Qualifications | Year |
|--|----------------|
| Masters in Health Professions Education, Aga Khan University, Karachi, Pakistan | 2023 - ongoing |
| Global Clinical Scholars Research Training, Harvard Medical School | 2021-2022 |
| Certification in Health professions education, Jinnah Sindh Medical University | June 30, 2020 |
| CPEM (2019) IHHN in collaboration with Center for Global Health delivery - Dubai-Harvard Medical School | June 30, 2019 |
| Fellowship of College of Physicians and Surgeons of Pakistan, (General Surgery), CPSP | Oct 13, 2014 |
| MBBS, Ziauddin University, Karachi. | Feb 13, 2006 |
| Higher Secondary School certificate, St. Joseph's College, Karachi | Sept 14, 1999 |
| Secondary School certificate, St. Joseph's Convent School, Karachi. | July, 19, 1997 |

Employment history

| Employment details | Duration |
|--|------------------------------|
| Consultant Emergency medicine Indus Hospital and Health Network, Karachi | Nov 1, 2020 - to date |
| Associate Consultant of Emergency Medicine Indus Hospital and Health Network, Karachi | July 12, 2018 – Oct 31, 2020 |
| Associate Consultant of Surgery, Indus Hospital and Health Network, Karachi | Sept 1, 2016 - May 28, 2018 |
| Senior Registrar of Surgery Maroof International Hospital, Islamabad | Apr 2, 2013 - Jun 1, 2015 |
| Postgraduate trainee (FCPS – II) Pakistan Institute of Medical Sciences, Islamabad (SZABMU) | Jan 23, 2008 - Jun 3, 2013 |
| House Officer, Ziauddin University Hospital, Karachi | Mar1, 2006 – Feb 28, 2007 |

Current Employment: Consultant Emergency Medicine at The Indus Hospital and Health Network(IHNN), Karachi, Pakistan

(Nov 2020 to date)

- Faculty lead for Tele emergency services at IHNN, Karachi
- Supervisor for FCPS-II Emergency Medicine residency at CPSP
- Head of clinical research committee in the Department of Emergency Medicine, IHNN, Karachi
- Mentorship for Clinical research, synopsis, and dissertation writing of postgraduate trainees.
- Clinical mentorship of postgraduate trainees.
- Management of patients presenting in the ED in collaboration with residents and medical officers.
- Development of emergency medicine algorithms, pathways, and clinical practice guidelines.
- Emergency department response and capacity building, COVID-19 Pandemic.
- Regular audits, mortality, and morbidity meetings.
- Regular teaching rounds in the emergency department.
- Regular teaching of POCUS.
- Development of EM Department policy-making and quality control projects.

Teaching experience

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| Program Director Certification Program of Emergency Medicine, IHHN, Karachi | Dec 2023 – to date |
| Grant writing session - Research minds, Karachi | May 17, 2024 |
| cHALO speaker | February 15, 2024 |
| Grant writing session - IHHN, Karachi | August 24, 2023 |
| Certification program in operational management, 2023, IHHN, Karachi | October 13, 2023 |
| CAT-C Trauma care course @ACIP, Antalya, Turkey | November, 5-7, 2023 |
| IHHN Emergency Leadership course @IHHN, Karachi, Pakistan | Oct 26-28, 2022 |
| SIM educator's workshop with SickKids @ICON22, IHHN | Jan 5-7, 2022 |
| SIM educator's workshop with SickKids @ IHHN | Mar 18 -20, 2022 |
| Pediatric EM module in collaboration with SickKids, Canada | Aug 13 - Oct 22, 2022 |
| Toxicology module in collaboration with Emory University | Feb 4- Mar 18, 2022 |
| | Jan 4- Feb 26, 2021 |
| CAT-C in collaboration with Emory University, Addis Ababa | Apr 12- 15, 2022 |
| CAT-C in collaboration with Emory University, Karachi, Pakistan | Jan 25 - 28, 2022 |
| Faculty for Certification program in Emergency medicine, IHHN, Karachi | 2020 - to date |
| Faculty for WHO/ICRC Basic Emergency Course, IHHN, Karachi March 2021 | |
| Faculty of Foundation program in Pediatric Emergency Medicine, IHHN, Karachi | 2022- to date |
| FCPS II Emergency Medicine Supervisor, CPSP, Karachi | May 2020 - to date |

Professional Affiliations and Activities

International:

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|--------------|--|
| 2022 to date | Member- International Pediatric Simulation Society (IPSS) |
| 2022 to date | Member of Society of Simulation and Health Care |
| 2022 to date | Member of the American College of Emergency Physicians (ACEP). |

National:

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|--------------|---|
| 2024 to date | Member, IHHN Scientific Research Committee, IHHN |
| 2023 to date | Chair, IHHN blood utilization resource committee |
| 2023 to date | Program director Certification program in Emergency Medicine |
| 2021 to date | Head, ED IHHN Clinical Research Committee, IHHN |
| 2021 to date | Secretary Media and Publications, Pakistan Society of Emergency Medicine (PSEM) |
| 2021 to date | Member, Pakistan Society of Emergency Medicine (PSEM) |

Local:

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|---------------|---|
| 2021- Present | Member of Departmental Clinical Committee, Department of Emergency Medicine, Indus Hospital and Health Network, Karachi, Pakistan. |
| 2021- Present | Member of Departmental Clinical Practice Guideline Committee, Department of Emergency Medicine, Indus Hospital and Health Network, Karachi, Pakistan. |
| 2021- Present | Lead - Departmental Clinical Research Committee, Department of Emergency Medicine, Indus Hospital and Health Network, Karachi, Pakistan. |
| 2021- Present | Member- Hospital Morbidity and Mortality Committee, Department of Emergency Medicine, Indus Hospital and Health Network, Karachi, Pakistan. |
| 2021- Present | Member Blood Bank Committee, Indus Hospital and Health Network, Karachi, Pakistan. |
| 2019- Present | Member, Internal Review Board (IRB), Indus Hospital Research Center (IHRC), Indus Hospital and Health Network, Karachi, Pakistan. |
| 2011 - 2013 | Chief Resident, Pakistan Institute of Medical Sciences, Islamabad, Pakistan |

Research and Publications:

Published Work

2024 **Co-investigator:** Adnan U, Mukhtar S, Khatri A, Ali S, Naeem A, et al. (2024) Case Report on Takotsubo Syndrome; A Life-Threatening Storm. *Cardiol Res Cardio vasc Med* 8: 216. <https://doi.org/10.29011/2575-7083.100216>

2024 **Principal investigator:** Dr. Sama Mukhtar, Dr. Adeel Khatri, Dr. Saima Ali, & Dr. Syed Ghazanfar Saleem. (2024). Here to Stay: Implementation of Tele-Emergency Medicine in a High Volume, Health Care network in Pakistan . *Current Clinical and Medical Education*, 2(01). Retrieved from <https://www.visionpublisher.info/index.php/ccme/article/view/34>

2023 **Co-investigator:** Bajwa M, Khatri A, Ali S, Ahmed R, Elgasim ME, Raechal L, Mukhtar S, Ansari T, Fayyaz J. Simplifying complexity science principles: developing healthcare faculty for using simulation as an educational method.

2023 **Co-investigator** Saleem SG, Ali S, Akhtar A, Khatri A, Ashraf N, Jamal I, Maroof Q, Aziz T, Mukhtar S. Impact of sequential capacity building on emergency department organizational flow during COVID-19 pandemic: a quasi-experimental study in a low-resource, tertiary care center. *BMJ open*. 2023 Jul 1;13(7):e063413.

2023 **Co-investigator:** Saleem S, Ali S, Khatri A, Mukhtar S, Farooq W, Maroof Q, Jamal MI, Aziz T, Haider KF, Dadabhoy FZ, Rybarczyk M “ Clinical Outcomes Following the Implementation of a Novel One-Year Training Program in Emergency Medicine in Karachi, Pakistan.”

2023 **Principal investigator:** Mukhtar S, Khatri SA, Khatri A, Ghouri N, Rybarczyk M. “Underneath the visible”- COVID-19 Risk prediction tools in a high-volume, low-resource Emergency Department. *Pakistan Journal of Medical Sciences*. 2023;39(1). <https://www.pjms.org.pk/index.php/pjms/article/view/6043>

2023 **Co-investigator:** Fayyaz J, Jaeger M, Takundwa P, Iqbal AU, Khatri A, Ali S, Mukhtar S, Saleem SG, Whitfill T, Ali I, Duff JP. Exploring cultural sensitivity during distance simulations in pediatric emergency medicine. *AEM Education and Training*. 2023 Dec;7(6):e10908.

2022 **Co-investigator:** Ali S, Khatri A, Ghouri N, Mukhtar S, Zawawi S, Saleem SG. Combining Non-invasive Ventilation with timed position change in the Emergency Department to improve oxygenation and outcomes in patients with COVID-19: A prospective analysis from a low resource setup. *Pakistan Journal of Medical Sciences*. 2022; 38(ICON-2022).

2021 **Principal investigator:** Mukhtar, S., Saleem, S., Ali, S., Khatri, S., & Yaffee, A. (2021). Standing at the edge of mortality; Five-year audit of an emergency department of a tertiary care hospital in a low resource setup. *Pakistan Journal of Medical Sciences*, 37(3). <https://doi.org/10.12669/pjms.37.3.3680>. Presented at Emirates Society of Emergency Medicine, Abu Dhabi, UAE (Dec 2019)

2011 **Co-investigator:** KHAN, M.A., RASHID, R. and SAMA MUKHTAR, N.A., 2011. Does Timing of Surgery Affect Outcome in Laparoscopic Cholecystectomy for Acute Cholecystitis? *Journal of Fatima Jinnah Medical University*, 5(3)

Research Projects Awaiting Publication/ Approval

2024 **Co-Investigator:** EPIDEMIOLOGICAL TRENDS OF FEBRILE INFANTS PRESENTING TO THE PEDIATRIC EMERGENCY DEPARTMENT, IN A TERTIARY CARE HOSPITAL, KARACHI, PAKISTAN ; A RETROSPECTIVE REVIEW. Authors: Qurat-ul-ain Bushra Noor Khuro , Sama Mukhtar

2022 **Principal investigator:** Pre-empting the fight for air; a comparative analysis of the efficacy of Remdesivir in a low resource setup.

2022 **Co-investigator:** Development of competency-based EM curriculum for the College of Physicians and Surgeons Pakistan (CPSP), with the incorporation of formative and summative assessment and Simulation-Based Education.

2022 **Co-investigator:** Epidemiology and Clinical Characteristics of Adult Patients Presenting to a Low Resource, Tertiary Care Emergency Department in Pakistan; Challenges & Outcomes

In Progress

2024 **Co-Investigator** Gender disparities amongst patients with hypertension presenting in low-resource, high-volume emergency department; **Sama Mukhtar MD** Adeel Khatri, MD, Saima Ali, MD, Ghazanfar Saleem, MD, Sabahat Fatima MD

2024 **Co-Investigator** Prevalence and determinants of burnout among residents working in a tertiary care hospital in Karachi, Pakistan. A cross-sectional study. **Sama Mukhtar MD** Adeel Khatri, MD, Saima Ali, MD, Ghazanfar Saleem, MD, Irsa Nadeem MD

2024 **Co-Investigator:** PATH application Pilot Study and Feasibility . **Sama Mukhtar MD** Adeel Khatri, MD, Saima Ali, MD, Ghazanfar Saleem, MD, Anna Q. Yaffee

2023 **Principal Investigator:** Factors affecting Bounce back visits; in the Emergency Department of a low-resource setting. **Sama Mukhtar MD** Adeel Khatri, MD, Saima Ali, MD, Ghazanfar Saleem, MD.

2023 **Principal Investigator** Merging Pediatric-Specific Shock Index with Manchester Triage System in determination and outcomes of early shock: A quality improvement project, of Pediatric Emergency. **Sama Mukhtar MD** Adeel Khatri, MD, Saima Ali, MD, Ghazanfar Saleem, MD. Urooj Adnan MD

2023 **Principal Investigator:** Prevalence and determinants of burnout among residents working in a tertiary care hospital in Karachi, Pakistan. A cross-sectional study . **Sama Mukhtar MD** Adeel Khatri, MD, Saima Ali, MD, Ghazanfar Saleem, MD. Irsa Nadeem MD

2022 **Co-investigator:** Applying Critical Incident Framework Using Culture Shock in Pediatric Simulations to Promote Cultural Sensitivity in Pediatric Emergency Medicine in Pakistan. Jabeen Fayyaz, MD, Adeel Khatri, MD, Dr. Phil. Margret Jaeger, Inayat Ali, PhD, Saima Ali, MD, Ghazanfar Saleem, MD, **Sama Mukhtar MD**, Isabel Theresia Gross, MD PhD MPH.

2019 **Co-investigator:** Trauma teams in Pakistan – A needs assessment where minutes count; **Sama Mukhtar MD** Adeel Khatri, MD, Saima Ali, MD, Ghazanfar Saleem, MD, Anna Q. Yaffee

Research Grants

Funded

2019 - Present **Co-investigator:** Collaborative Advanced Trauma Care (CAT-C) course in collaboration with Emory University, Atlanta, USA. A grant from Emory University. 20,000 USD

Description: This grant was awarded to conduct inter-specialty courses for capacity building in trauma care. The courses have so far been conducted in various cities in Pakistan, Ethiopia, Turkey and Vietnam.

2021 **Co-Investigator:** Promoting Cultural Sensitivity in PEM by using Distance Simulation Collaboration between SickKids, Yale University, USA, Indus Hospital and Health Network, Karachi Pakistan.

University of Yale Grant: Innovation in Pediatric Education Grant Award at Yale University. 3,000 USD.

Presented at Utrecht University's Conference on Developing Intercultural Competencies in Online and Physical Learning Environments in 2021.

Description: A six-week, asynchronous distant simulation program was conducted with the Pakistani EM residents at IHHN and USA-based PEM fellows from diverse cultural backgrounds. This was to understand and explore the concept of cultural sensitivity amongst the residents and fellows at both ends. The additional aim was to develop a sustainable working relationship between the respective institutes.

In Progress

2022 **Co-investigator:** Applying Critical Incident Framework Using Culture Shock in Pediatric Simulations to Promote Cultural Sensitivity in Pediatric Emergency Medicine in Pakistan. Jabeen Fayyaz, MD, Adeel Khatri, MD, Dr. Phil. Margret Jaeger, Inayat Ali, PhD, Saima Ali, MD, Ghazanfar Saleem, MD, **Sama Mukhtar MD**, Isabel Theresia Gross, MD PhD MPH. Applied to INSPIRE Awards: 5000 USD.

Description: The healthcare professionals in Pakistan need to be educated in Diversity, Equity, and Inclusion (DEI) in view of the diverse and multi-ethnic cultural and religious beliefs. This can assure safe and quality care provision, especially in the vulnerable pediatric population. The study employs the use of a Critical Incident Framework to identify culture shock that can be used to teach multi-disciplinary healthcare providers to deal efficiently with cultural shock situations. The development of curricula in consensus with Anthropologists can result in increased awareness about cultural sensitivity.

Scientific Paper Reviewer: Journal of College of Physicians and Surgeons of Pakistan

Oral presentation

2023 IQRA, AKU - COVID-19 tabletop exercise for emergency department preparedness in a low resource setting; Experience from a resource-limited setup

Poster presentation

2018 ICON 18; A 3-year audit of thyroid diseases presented at Indus Hospital and Health Network.

Presentations

National

- 2024** Invited speaker CHALO program
- 2023** Invited speaker for Turkish Emergency Medicine conference, Antalya, Turkey
- 2022** Invited speaker for breast cancer awareness, Cedar School
- 2022** Invited Speaker at Emergency Medicine Day, SMBBT, June 2022
- 2021** Invited Speaker at ICON 2022: Role of the lab in meeting the needs of critical care
- 2022** Invited Speaker at PSEM: An approach to shortness of breathlessness
- 2020** Invited Speaker at Pakistan Television network for COVID-19 awareness

- 2020** Invited Speaker at Geo Television Network for COVID-19 awareness
- 2020** Invited Speaker at Beacon House School System for Pediatric Health Awareness
- 2021** Invited Speaker at, Sami Pharmaceuticals Speaker for COVID-19 public awareness
- 2020** Invited Speaker at Sami Pharmaceuticals Speaker for COVID-19 public awareness
- 2020** Invited Speaker at Ziauddin University for COVID-19 public awareness

Professional skills and workshops

- Basics of Online Assessment and Teaching May 1-Jun 30, 2020, JSMU, Karachi
- CAT-C 2019, IHHN, Karachi
- WHO/ICRC - Basic Emergency Course Tot April 2021, IHHN, Karachi
- WHO/ICRC - Basic Emergency Course March 2021, IHHN, Karachi
- Basic Life Support 2019, American Heart Association
- Advance Cardiac Life Support 2019, American Heart Association
- Advanced Trauma Life Support 2019, American College of Surgeons
- Education Planning and Evaluation. March 2019, CPSP, Karachi
- Supervisory skills CPSP, Karachi April 2019, CPSP, Karachi
- Assessment of Competence Aug 2019, CPSP, Karachi
- Research Methodology, Biostatistics and Medical Writing Nov 2019, CPSP, Karachi
- WHO –Patient safety Friendly hospital initiatives workshop Karachi? Feb 2020, IHHN, Karachi
- Drug use safety workshop 2020, IHHN, Karachi
- Covid-19 Government of Sindh March 2020, CHK, Karachi
- Introduction to Computer and Internet, conducted by “WHO Collaborating Centre for Research and Training in Educational Development of Health Personnel” 14 – 18 Jun 2011, CPSP, Islamabad
- Primary Surgical Skills, conducted by “WHO Collaborating Centre for Research and Training in Educational Development of Health Personnel” 11-13 Aug 2009, CPSP, Islamabad
- Communication skills, conducted by “WHO Collaborating Centre For Research and Training in Educational Development of Health Personnel” 23- 25 Jun 2011, CPSP, Islamabad
- Research methodology, biostatics, and dissertation writing, conducted by “WHO Collaborating Centre for Research and Training in Educational Development of Health Personnel” CPSP, Islamabad
- Total Parenteral Nutrition Therapy Aug 2006, ZMU, Karachi
- Multimodality management of differentiated Carcinoma Thyroid, NORI. Jul 2012, Islamabad
- Health Care Waste Management, Maroof International Hospital April 2015, Islamabad
- Aspirin and clopidogrel resistance Oct 2016, AKUH, Karachi
- Current advancements of molecular diagnostic of Hepatitis B and C Mar 2017, AKUH, Karachi
- Annual Colorectal Week 2016, JPMC, Karachi

Electives

Clinical electives at Shaukat Khanum Memorial Cancer Hospital and Research Center, Lahore (Jun 1 -30, 2005)

Research Electives: Aga Khan University Hospital, Karachi (Nov 2 - 23, 2003)

Software skills

Excellent understanding of MS Office and SPSS, Excel, and STATA.

Extracurricular interests

- Public awareness speaker and conducting workshops.
- Fine Arts students at Indus Valley School of Art and Architecture, Karachi, 1999- 2000
- Certificate of Appreciation, Marie Adelaide Leprosy Centre.
- Certificate of Service, National Women Guards, 1998.
- School Magazine Art Director, 1997
- Literature
- Travelling and hiking

Languages

Fluent in Urdu, English, and Punjabi.
Understands Sindhi

References: Available on request