3rd INTERNATIONAL CONFERENCE ON HEALTH PROFESSIONS EDUCATION

Conference Theme:
Student Centered Education: Missing Piece in Preceptor's Belief

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ABSTRACTS
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Name: Iram Manzoor
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Title: Medical ethics: Students perception about ethical practices and its inclusion in undergraduate curriculum in Pakistan

Introduction: Medical Ethics is a neglected subject in undergraduate curriculum of Medicine and Dentistry in Pakistan. Recent trends of emerging ethical dilemmas in clinical practices indicate the need to include this important subject in undergraduate curriculum. The main objective of this study is to identify student's perception about ethical dilemmas and inclusion of medical ethics as part of curriculum.

Methodology: A cross sectional survey was conducted at Fatima Memorial Hospital College of Medicine and Dentistry, Lahore on 176 students after IRB clearance, on the first day of entry in Medical College. A nonprobability, Purposive sampling technique was used to include these students. A self-administered questionnaire was used to collect data. SPSS version 20 was used apply Chi square test p value of less than 0.05 was considered to be significant.

Results: Female predominance was observed among participants (64.8%). Important professional traits for doctors were identified as Clinical knowledge (100%), Honesty (100%), & Integrity (99.4%). Training in Medical Ethics was considered essential by 99% of the students. There was no statistical difference observed in knowledge of medical ethics between two genders. Disclosure of diagnosis in case of risk (p= 0.842), Maintenance of privacy during examination (p= 0.55) Health care provision regardless of religious beliefs (p= 0.89), consent for procedures (p=0.842), euthanasia(0.669), DNR with debilitating diseases(p=0.218), consent before exposure (0.628) and reporting ethical misconduct(p=0.814)

Conclusion: Students are well aware of ethical dilemmas in clinical practice before entering medical and dental college. They strongly believe that Medical Ethics should be part of their curriculum at undergraduate level.

Theme: Teaching & Learning
Name: Sara Shakil
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Title: Association of teaching methodology and student learning

Introduction: The concept of teaching and learning in undergraduate medical education has evolved drastically over the past few years with respect to small and large group learning methods. Hence this comparative study identifies the association of instructional methods on learning of students through analysis of mean scores obtained from formative quizzes.

Methodology: This observational comparative study was conducted in the Department of Biochemistry, Bahria University Medical and Dental College, Karachi. The research participants comprised of 2nd year medical undergraduates who attended all three teaching methods i.e. lecture, tutorial and PBL. Out of these students, 90 students took all three formative quizzes at the end of each instruction and were included in the study.

Results: Data analysis was carried out using repeated measure ANOVA to compare the differences in written test scores among multiple groups. The results of this study reveal that students learn better through tutorials in comparison to PBL and lecture. The results of this study signify that maximum number of students are declared pass in post-tutorial quiz followed by post-PBL and post-lecture quizzes. All p-values <0.05 are considered significant.
Conclusion: This study concludes that students learn better through tutorials in comparison to PBL and lecture. Although the results of this study show better learning of students in small group learning, there are gaps in the processes involved in their planning and implementation. However, flexible guidance during tutorials and improvement in large group teaching may result in better performance of medical students.

3

Theme: Teaching & Learning
Name: Khizar Ansar Malik
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Title: Team-based learning (TBL) or Problem-based learning (PBL): Student's perception in University College of Medicine

Introduction: We at University College of Medicine, are following integrated modular curriculum and are using different teaching approaches to make learning easier for our students. Problem based learning is an integral part of our MBBS curriculum. We introduced TBL to 2nd year MBBS students in the Pharmacology department, who are also practicing PBL in 2nd year.

Methodology: Students were asked to fill out the questionnaire regarding each teaching strategy anonymously using both open and closed ended questions. The data was analyzed by using SPSS version 21.

Results: A total of 120 students filled the questionnaire regarding their perception about TBL, and 94 students filled the questionnaire regarding PBL. Students found the readiness assurance tests and immediate feedback effective for their learning in TBL. While for PBL, students found that different point of views were respected by group members and there is better integration among different disciplines in PBL.

Conclusion: PBL has its advantages, but we strongly suggest including TBL in curriculum

4

Theme: Teaching & Learning
Name: Adnan Anwar Sukkarwalla
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Title: Understanding perception of teacher regarding their teaching and student learning

Introduction: Teaching is a powerful tool, if used effectively; it can change attitude, knowledge, skill and capacity of learner. It's been seen that teacher and student are struggling in higher education system, as many teachers faced problem in teaching their course effectively.

The aim of this research is to understand how medical teachers perceive their different roles of being a teacher and their views on student learning and their own development as a teacher.

Methodology: We used a questionnaire by Trigwell called Approach to teaching Inventory. Questionnaire can give an overview of teacher’s approach to teaching, which can be focused on information transferred knowledge or making conceptual change.

We further inquired teacher about their role in teaching and their difficulties they face by using semi structured interview.
Results: We found equal score on teacher centric and student centric with no significant difference on Statistic. And after analyzing interview, we found three themes: Teacher as driving force, Curriculum Design and Applying teaching.

Conclusion: This research reports evidence of a range of positive changes as a teacher, with continuous development and workshop and a contrasting lack of institutional support and peer pressure they face in undergraduate medical education. We concluded that a teacher not only should have a base knowledge about the subject but should continually receive formal in-service training to improve

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**Theme: Teaching & Learning**

Name: Rizwan Hashim
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**Title: Learning in clinical skill lab CSL: The user perspective**

Introduction: Until recently, for training of health care professionals’ clinical skills were taught on patients. Due to concerns of patient’s physical safety and distress, ethical, religious issues, concept of core competencies, alignment of curriculum with educational philosophies, technology enabled teaching methodologies, increased number of health professions students in one session, many health professionals training institutes and medical colleges are progressively moving towards adding clinical skills training centers in their premises. Medical literature is deficient regarding the exploration of health professions trainee students’ perception, problems they face and their suggestions for learning issues regarding clinical skill centers. The subject needs to be studied and deliberated in the local context of resource constraint developing countries learning situations as ours.

Methodology: One to one semi structured interviews were conducted, and qualitative data was collected. Literature search was done extensively before formulating the interview questionnaire. This was followed by expert validation. Audio recording was done of all the interviews, the same were transcribed, coded and analyzed both manually and by importing it into Pro 11 version of Nvivo, this was followed by thematic analysis.

Results: Twenty participants, 6 males and 14 females participated in the study, with a minimum of 6 to a maximum 9 months of training in CSL. All the participants confirmed that the training in the CSL increased their motivation and confidence, a large majority agreed that their teachers/facilitators demonstrated the skills in a professional manner, the facilitators were vigilant during the teaching sessions and observed the trainees while they practiced, most of the trainees acknowledged that they had completed their training utilizing all the equipment. The participants appreciated the learning in CSL, the knowledge, skills, experiences and confidence, they acquired. However, they mentioned the shortage of space, time given, and equipment provided for their training.

Conclusion: All the CSL trainees strongly endorsed this method of hands on training, they narrated that inspirations, motivation, training and guidance provided by the instructors enhanced their learning in CSL, while shortage of time for practice, space in CSL and manikins hampered their learning.
Title: What patients teach us- Musings of unorthodox learning in medicine

Introduction: Medical education in Pakistan has only recently seen development in ethics training. Traditionally, training comes from seniors' etiquettes, some lectures on healthcare professionalism and personal understanding of virtues. However, changes in clinical practices due to advanced technologies and evolving dynamics of patient-physician relationship has amplified need of structured approach to clinical ethics.

Methodology: A narrative paper with objectives:

- To discuss importance of Reflection & Narration in Medical Education
- To share experiences from clinical training that provoke discussion of ethics, values & virtues in Medicine

Results: The situations encountered during clinical training by healthcare providers and medical students teach us unorthodox lessons that distinguish a doctor from a 'good doctor'. Hence, these unorthodox ways may not be neglected by medical educators of today.

Conclusion: The situations encountered during clinical training by healthcare providers and medical students teach us unorthodox lessons that distinguish a doctor from a 'good doctor'. Hence, these unorthodox ways may not be neglected by medical educators of today.

Title: Interplay of cognitive strategies used by teachers and extraneous load of medical students

Introduction: While preparing a teaching session, medical teachers need to employ appropriate cognitive strategies to decrease extraneous load of students as it makes space for processing complex information. Objective of study was to explore the use of cognitive strategies in medical teachers with reference to their teaching sessions.

Methods: A phenomenological study was conducted after approval from ethical review board of the Islamic international medical college. Pre-clinical and clinical medical teachers were selected through purposeful sampling without gender discrimination. Data was collected through semi structured interviews and transcribed for "Textural and structural analysis" by observing "What" was said by the respondent and "how" it can be explained. Each statement was given equal value. Coding was done in two cycles. A constant comparison among the respondent's responses was done to form categories and themes during second cycle of coding. Inductive thematic analysis was done.

Results: Total seven themes were identified. All teachers preferred to know the "learning objectives" of teaching session. Medical teachers preferred to "rehearse by repeating their topic for better communication" and believed in "making summaries" to clear their concepts and thinking of "metaphors". An attempt to find the answers of possible "questions by students during teaching sessions" was found another footstep of their learning. For their deep learning, medical teachers preferred to organize their content and use "flow charts to split the main concept along with pictures" in their presentation. "Video and pictures" were preferred as tools for better understanding of learners.
Conclusion: Medical teachers apply cognitive strategies to reduce extraneous load of learners. They repeat their concept for better expression and communication during teaching. Making summaries and analogies facilitates their teaching while using pictures and videos facilitate learner’s complex thinking of learners. They divide difficult concepts into smaller chunks through flow charts.

8
Theme: Teaching & Learning
Name: Komal Atta
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Title: Come to the dark side - Make your own OSPE: A pilot study

Introduction: Physiology for BDS is a tediously long course crammed into one year, students going through this cognitive overlook tend to overlook the clinical aspects and underperform in OSPEs, as they are exerting efforts in learning the core content.

Our aim was to develop a learning technique to promote deeper learning of the practical and critical aspects of Physiology and perform better in the OSPE.

Methodology: A longitudinal study was conducted with the newly enrolled BDS class of 2018 (n=50), after debriefing and a preliminary OSPE, they were debriefed about the technique of the ROSPE (reverse OSPE) in which they were to make their own questions with answers already provided at the stations. Feedback was provided and reflections of students were recorded and analyzed thematically. After every ROSPE, the test scores of the subsequent OSPEs were compared with the class of the previous year.

Results: Test scores of students who had undergone the ROSPE interventions were remarkably higher as compared to those of the previous batch (p=0.0050, 0.001, 0.001) and results in Professional examination were also better. Thematic analysis showed the ROSPE to be a confidence building activity that promote deeper learning and teamwork.

Conclusion: The ROSPE is a successful intervention to improve practical and clinical skills for the OSPE exam.

9
Theme: Teaching & Learning
Name: Mohammad Idrees
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Title: Comparison between student-centered vs. teacher-centered teaching strategy among first year students of fellowship training in Ophthalmology

Introduction: several forms of learning strategies are introduced. Self-directed learning has become an efficient learning approach for the students to develop aptitude in knowledge acquirement. Various studies have evidenced that Self-centered learning has constructive and beneficial effect on students.

Methodology: This cross-sectional study was conducted at Postgraduate Medical Institute, Peshawar by convenient sampling method on 30 students of ophthalmology in their first year of fellowship training (FCPS) during Jan 2015 to Jun 2015. Students were grouped based on different teaching methods as Group A in which Student-centered approach was assigned and Group B were assigned to teacher centered approach. Both groups were evaluated on the basis of different grading methods. Total of four assessment methods were used: 1-presentation on individual student basis, 2-clinical projects based on patients, 3-individual based written assignments and 4- summative assessment
through MCQs. Grades were evaluated on the bases of scoring method. Each assessment carries 100 marks. Marks under 19 scored 1, marks 20-29 scored 2, marks 30-39 scored 3, marks 40-49 scored 4 and marks 50-100 scored 5. Grading was based on checklist for each assessment method. Frequency and percentage were calculated from the data and independent "t" test were applied to assess the mean ± Standard Deviation of scored marks and level of significance among both the groups. Data was analyzed and presented in the form of tables and graphs.

Results: The results showed higher frequency of grades in group A in all assessments compared to group B. Mean score was higher in group A (p= <0.01) in all assessment as compared to group B.

Conclusion: Grading was significantly higher in student centered learning strategy as compared to teacher centered in students of Fellowship in ophthalmology in their first year of training.

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Theme: Teaching & Learning
Name: Shabana Ali

Practice to preach self-regulation: Use of metacognitive strategies by medical teachers in their learning practices

Objective: To explore the use of metacognitive skills by medical teachers in relation to Zimmerman's model of self-regulation.

Methods: A qualitative phenomenological study was conducted at Riphah International University after approval from ethical review board. A semi structured interview of ten medical teachers was planned to uncover the lived experiences of selected teachers to demonstrate how these teachers use metacognitive strategies in different phases of their learning. Data was collected by asking five open ended questions after expert validation. Data was analyzed by using N-Vivo software.

Results: Total eight themes were extracted. For prediction and planning three themes, brainstorming, making concept map and sufficient time required were isolated while teachers selected learning objectives and level of students for resource selection while for motivation theme selected was previous experience. Two themes, self- questioning to improve the learning and extra effort required to meet the timeline were isolated for monitoring and reflection during and after learning for evaluation of learning process

Conclusion: During forethought phase, medical teachers predict their learning process through learning objectives and plan after brainstorming to make a concept map and use suitable learning resources. During learning, they monitor learning process through self-questioning and put extra-effort to meet the deadlines. During and after learning, teachers reflect on their performance.
Title: Developing ethical leadership in health-care - Introducing bioethics in postgraduate curriculum

Introduction: Healthcare professionals shall develop skills and knowledge that can be translated into clinical practices, patient care and even health related policy making, all adding up to improve the quality of healthcare provided to patients. Shalamar Institute of Health Sciences recognizes the need of structured education of medical ethics among the healthcare professionals and introduced mandatory Bioethics training for Post-graduate(PG) trainees.

Methodology: A mixed-method study to narrate experience of developing and implementing a Bioethics training program for PG trainees at SIHS. The survey/feedback consists of quantitative as well as qualitative analysis. All PG Trainees, undergoing mandatory training were included in the study.

Results: Total 30 PG trainees participated in study, all of whom found the training sessions useful. 100% participants recommended no change in time/duration. All(100%) agreed that their knowledge and attitudes improved. Following main themes emerged from Qualitative analysis: i) Importance of Ethics Training; ii) Effective dealing in critical care areas; iii) Effective communication skills

Conclusion: Bioethics training for PG-trainees is introduced to nurture compassionate, morally and culturally sensitive professionals. We share our experiences with the hope that this initiative would serve as the first step of a long journey towards creating leaders in the field of ethical professionalism.

Title: Effective modes of teaching for development of concept in basic medical education in Pakistan: medical students’ perspective

Introduction: There are more than 50 medical colleges situated across Punjab, and 27 out of them are affiliated with the University of Health Sciences (UHS). The mode of teaching in primarily all medical colleges is ‘teacher-dominant’, and students are passive learners attributed to the traditional modes of teaching. Curriculum prescribed by UHS is followed by colleges, and teachers focus more on theoretical knowledge of medical subjects, and less emphasis is laid upon concept building, learning skills, clinical approach, augmented with lack of regular student feedback systems (Shakoori et al;2017).

A study conducted on 243 students selected from final year of Quaid-e-Azam Medical college in 2018, concluded that small group discussion is the most adequate strategy for fostering in-depth knowledge of the medical subjects (Masroor Q et al;2018). Previously, a similar study conducted at RMC, (Rawalpindi Medical College) majority of students rated problem-based learning (PBL) as an effective tool for better understanding of medical subjects and it promotes confidence building and self-learning abilities among students (Sultana A et al;2010). In this context LMDC (Lahore Medical & Dental College) introduced novel modes of teaching in basic medical sciences and evaluated the students’ response using special questionnaire.

Methodology: Considering the modalities of teaching, data was collected from students of LMDC (Lahore Medical &
Dental College) by a structured questionnaire to obtain students' perspective of development of good concept and learning. A sample of total 378 students was taken by convenient sampling after taking consent and anonymity was ensured to all participants.

Results: Teaching methods were rated using the Likert scale (1-strongly disagree, 2-disagree, 3-undecided, 4-agree and 5-strongly agree). This study included students of 1st yr., 2nd yr., 3rd yr. and final yr. MBBS sessions during January 2019 to April 2019 and included a total of 378 students from all classes. 110 students from 1st yr, 89 students from 2nd yr., 96 from 3rd yr. and 83 students from final yr. were randomly selected. Of the total 378 students, 68% were females, while 32% were males, and among these 43% students were residing in hostels, while 57% were day scholars.

Conclusion: This study highlights problem-based learning as the most effective mode for development of concepts (63.6%), followed by white board teaching (61.2%), and interactive sessions (46.1%). Interestingly, power point presentation lecture, which is the most commonly used mode of teaching in medical colleges, is considered to be the second least effective method of developing concepts in medical subjects taught. In contrast, small group discussion is considered to be the least effective modality of teaching in this study.

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Theme: Teaching & Learning
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Title: Integrated modular teaching: Evaluation by students at an undergraduate medical college

Introduction: Development of curriculum is a dynamic process. Conventional disciplined-based curriculum had been heavily criticized due to overloaded study program. Knowledge is strongly compartmentalized and disintegrated. Traditional teaching method involves teaching of basic sciences and clinical teaching due to which they lack relevance between basic and clinical sciences. An Integrated teaching system was introduced in Cleveland USA in 1952. An integrated curriculum is the one which synchronize subjects which are taught in separate academic courses. The main objective of this system is to devise such curriculum which doesn't over burden students and teach such skills which will help them in patient care.

Methodology: This was a cross-sectional descriptive study conducted on first and second year MBBS students of Karachi medical and dental college. A total of 215 students participated in the study after written consent. Data was collected through a self-administered questionnaire which was validated through a pilot study. A five-point Likert scale was used to measure the responses. Data was analyzed using IBM SPSS V.20.

Results: Overall the students found lectures a little useful 104(48.4%). Overwhelming number of students, 126(58.6%) said that tutorials were not useful. Most of the students 99(46.0%) agreed that the curriculum taught was at the level of their understanding. Most of the students were not satisfied with the time allocated for module completion. 104(48.4%) students agreed that it helped them in understanding topics. Majority of them agreed to continue this model in the future.

Conclusion: Our study showed positive feedback of students towards integrated modular system of teaching. For every system to work effectively and positively continuous evaluation is needed. Therefore, further studies should be conducted in future for evaluation.
Title: Evaluation of training course on “Integrated Management of Neonatal & Childhood Illness” (IMNCI) using Kirkpatrick Model (Level-2)

Introduction: Integrated Management of Childhood Illness (IMNCI), taught by 6-days training course, is an important initiative to decrease childhood mortality. Level 2 of Kirkpatrick Model entails assessment of the learning achieved by training activity.

Objective: To assess improvement in the knowledge of IMNCI content among the participants of 6-day IMNCI training program.

Methodology: After taking approval from IRB, this quasi-experimental study was carried out in the Pediatrics Department, KEMU Lahore. By non-probability consecutive sampling, all 77 participants of three 6-day courses (with no previous formal training of IMNCI) were included in the study. Each participant filled a pre-test and a post-test after the training. Non-parametric test – Wilcoxon test was applied to compare the overall mean scores of pre-test and post-test. Kruskal-Wallis Test was applied for overall comparison of the mean scores of pre-test and post-test between the groups. While Mann Whitney U-test was applied for pairwise comparison of the mean pre-test and mean post-test scores between different pairs of participant groups. Cronbach's alpha was applied to determine the reliability of assessment tool.

Results: Of the 77 participants there were 35 doctors, 20 nurses, 20 LHVs and 2 midwives, with a 100% response rate. The overall mean score of pre-tests was 3.43 (+ 1.56) and 7.65 (+ 1.48) for post-test (p-value < 0.001). Except for the midwives, there was statistically significant improvement in the mean scores of each group. Item-analysis of the questions showed that compared to the pre-test, the proportion of correct answers in the post-test showed statistically significant improvement for all the 10 questions. Pairwise comparison of the mean pre-test and mean post-test scores between different participant groups did not show statistical significance except for the doctor-nurse pair. Cronbach's alpha was 0.391, showing poor reliability of assessment tool.

Conclusion: IMNCI training program significantly increased the knowledge of health care providers with no statistical difference between the post-test scores of doctors, LHVs and midwives.

Title: Medical education: The need for enlightenment

Introduction: Education and enlightenment have been philosophically synonymous, with each serving to enhance the other. Education is often portrayed as a beacon of light that dispels the darkness of ignorance. This research, however, focuses on the literal aspect of it all, i.e. light and its role in promoting active / attentive learning. This research thus hopes to gauge the indoor classroom lighting and assess its association with attention level of medical students.

Methodology: This descriptive, cross-sectional analysis was conducted on a sample of 300 medical students (chosen via non-probability – purposive sampling) enrolled in first and second year MBBS at Liaquat University of Medical & Health Sciences, Jamshoro and Bilawal Medical College, Jamshoro. After taking written informed consent, the students were administered the “Bourdon Attention Test” in classrooms and lecture halls with different indoor lighting.
levels (gauged using google calibrated ambient light sensors). Data was analyzed using SPSS v. 21.0.

Results: Among the 300 medical students enrolled into the study, 52.67% were females, while the remaining 47.33% were males. The mean age of sample stood at 19 years (SD ± 0.5). The mean luminescence level recorded at different indoor educational settings (demonstration rooms and lecture halls) was 41.33 (SD ± 11) lux with a range of (8.3 to 91.0) lux and the mean score recorded for Bourdon Attention Test was 57%.

Conclusion: A strong association was noted between the mean luminescence level of the educational setting and mean bourdon test score of the students (P < 0.05). Thus, improving the indoor lighting conditions may help to improve student attention levels and consequently improve the learning.

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**Theme: Teaching & Learning**

**Name:** Rabbia Qadeer  
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**Title:** Interprofessional education: Are we ready for it?

**Introduction:** Background- Interprofessional education arose as a solution to the increasing healthcare challenges occurring worldwide, however its practice is mostly lacking in developing countries like Pakistan where the concept of IPE has yet to be formally established.

**Objective-** To assess the readiness of dental and medical postgraduates for interprofessional education.

**Methodology:** A cross sectional survey was conducted at Fatima Memorial Hospital, College of Medicine and Dentistry, from August 2019 to September 2019, using the ‘readiness for interprofessional learning scale (RIPLS) which was to be scored on a 5-point Likert scale. Participants included all 178 postgraduate trainees enrolled in different FCPS program at the institute. Data was interpreted using descriptive, parametric and nonparametric statistics.

**Results:** The response rate was 61% (109/178), out of which 60% were females. The overall mean score for readiness was 79.26±6.84. The lowest mean score was 7.02±1.2 for the roles and responsibilities domain. A comparison between the two disciplines, genders and training year showed no significant difference, however findings for the final year training were slightly higher than others.

**Conclusion:** The medical and dental postgraduates, both showed equal and considerable readiness towards IPE. Though highly in favor of shared learning, they had ambiguity regarding their roles and responsibilities. This favors the immediate introduction of IPE in Pakistan at all levels to promote collaborative practice and diminish professional identity uncertainty; all for the betterment of Pakistan’s healthcare system.

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**Theme: Teaching & Learning**

**Name:** Saadia Shahzad  
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**Title:** Perceptions of undergraduate medical students regarding the educational environment: Baseline study at a private medical and dental college in Lahore

**Introduction:** The educational environment in an academic institution comprises of everything that happens within the scope of the classroom, outside the classroom, in a department, among the faculty, and in the university. educational environment is one of the most vital components that determines the success or failure of an institute.
previous researches have documented association between educational environment and satisfaction level and performance of students. According to World Federation for Medical Education (WFME), educational environment must be considered as one of the key areas that need to be addressed during the evaluation of program of a medical institution.

Methodology: descriptive cross-sectional study conducted at Shalamar Medical and Dental College Lahore during the period July-Oct 19. A sample of 375 was taken, equally divided among five classes and both genders; through non-probability sampling technique. Inclusion criteria were willingness, and all undergraduate medical students enrolled for this program. Exclusion criteria were nursing & allied students, and students who had taken part in a similar research in the past one year. Data collection instrument was standardized & validated DREEM questionnaire. Data analyzed upon SPSS 16 as: 1) descriptive statistics, mean & SD for all categories, frequency trends noted for total & subunit scores of DREEM 2) Independent sample t-test applied to identify gender & residential status related difference with scores 3) ANOVA applied to identify variation among groups.

Results: DREEM total score mean was 118.24 & SD 19.41. 44.54% males & 55.5% females responded from all five classes. 51.1% were day boarders & 48.9% hostilities. Upon Total score categorization: 0.3% in very poor, 15.3% plenty of problems, 81.7% more positive than negative, & 2.7% excellent. Independent sample t-test upon all DREEM scores showed highly significant P-values <0.05 with gender & residential status of students. One-way ANOVA showed highly significant P-values <0.05 with the total DREEM score as well as with its subunit domain scores.

Conclusion: As baseline survey significant results have been found in this study which should be looked into with in-depth insight for the benefit of the students and institution; specifically, in areas where negative responses have been given by the students. Assessment of the educational environment should be conducted on a regular basis as per policy in order to improve teaching and learning environment.

Theme: Teaching & Learning
Name: Nabila Talat
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Title: Perception of surgical residents about learning in operation theatres at CHICH using STEEM

Introduction: Educational environment or learning environment is a context in which teaching, training and grooming of post graduate residents occurs. Surgical specialty as a whole and operating rooms in particular are very important in terms of teaching and training. Perception of residents as to this learning environment is quite vital to their learning and should be assessed objectively to identify weak and strong areas of the environment. The Surgical Theatre Educational Environment Measures (STEEM) questionnaire is an instrument that can be used to assess perception of residents about learning environment in operation theatre.

Methodology: To evaluate the perception of surgical postgraduate residents about their learning environment in operating rooms and compare this perception among different strata of residents as to age, gender, and year of residency.

This cross-sectional study was conducted at The Children’s Hospital & The Institute of Child Health Lahore. STEEM questionnaire was used to check the perceptions of educational environment in surgical theatres. This study was carried out from July 2019 to September 2019. A total of 62 surgical residents were given printed questionnaire after informed consent. The data was analyzed through SPSS V24 and descriptive and inferential analyses were performed.

Results:
Out of 62 surgical residents, 61 responded (Response rate 98.3%). Mean age of residents was 29.27 years (±2.37); 45 residents were male whereas 16 were females (2.8:1). Majority of residents were from 3rd (34.4%) and 4th (21.3%) year of their residency. The total mean score was 147.66 (±18.57). No difference in mean scores were found as to age and sex of participants; whereas, responses were statistically more positive for residents in their first year or fifth year of their residency. Overall 53 residents gave favorable/positive response.

Conclusion: Overall residents had good perception about their training and supervisors, learning opportunities in operation theatre, atmosphere in operation theatre, and supervision being provided to them.

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Theme: Research
Name: Saba Iqbal
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Title: Metacognitive awareness and academic achievement of medical students in different medical colleges of Lahore, Pakistan

Introduction: Metacognition is thinking about thinking or re-thinking. It envelops self-information of learning strategies and the capacity to utilize this information in a productive and viable way. Metacognition in the learning process plays a fundamental role, especially among medical students to achieve their goals. It helps learners to be capable of developing a plan, monitor and evaluate. Metacognition has two main components, the first is metacognition awareness in which a person is aware of own cognition process and second is his metacognition regulation

This study will be useful for medical students to improve their metacognitive skills and to achieve academic goals, as doctors they are expected to perform excellently and be independently lifelong

Methodology: Study was done among second year students of two private medical colleges in Lahore. Students’ first year academic achievement information was collected, and they also filled the semi-structured questionnaire on metacognition regulation by the metacognitive awareness of reading strategies inventory (Marsi) based on three dimensions of metacognition (GLOB, SUB and PROB). Simple random sampling, a type of probability sampling was used for this study. The data were entered into SPSS 20, Metacognitive score was taken as an independent variable while academic performance (first professional part 1 results) was the dependent variable. For descriptive data, mean and standard deviation were used. For categorical data, percentage and frequencies were used. Pearson correlation coefficients were calculated to examine the item-total score correlation

Results: A total 232 students participated. The reliability coefficient of Marsi was 0.88 and there was a strong correlation among all dimensions of Metacognition score and academic achievement with Correlation coefficient value was 0.257 (p<0.01). Medical students of different colleges have almost equal (college 1 std. deviation 109±15.3, college 2 std. deviation 110.6±17.3) Metacognition levels.

Conclusion: All dimensions of metacognition are positive and strongly correlated with each other. Higher the score in one dimension will cause positive change in another dimension score and vice versa. Overall it would be beneficial for the trainers and other mentors to work on one dimension and it would also cause a positive impact on other skills and strategies.
Title: Gamification and multimedia for medical education

Introduction: Medical education is rapidly evolving. Students enter medical school with a high level of technological literacy and an expectation for instructional variety in the curriculum. In response, many medical schools now incorporate technology-enhanced active learning and multimedia education applications. Education games, medical mobile applications, and virtual patient simulations are together termed gamified training platforms.

Methodology: Peer-reviewed literature, commercially published media, and grey literature were searched to compile an archive of recently published scientific evaluations of gamified training platforms for medical education. Specific educational games, mobile applications, and virtual simulations useful for preclinical and clinical training were identified and categorized. Available evidence was summarized as it related to potential educational advantages of the identified platforms for medical education.

Results: Overall, improved learning outcomes have been demonstrated with virtual patient simulations. Games have the potential to promote learning, increase engagement, allow for real-world application, and enhance collaboration. They can also provide opportunities for risk-free clinical decision making, distance training, learning analytics, and swift feedback. A total of 5 electronic games and 4 mobile applications were identified for preclinical training, and 5 electronic games, 10 mobile applications, and 12 virtual patient simulation tools were identified for clinical training. Nine additional gamified, virtual environment training tools not commercially available were also identified.

Conclusion: Many published studies suggest possible benefits from using gamified media in medical curriculum. This is a rapidly growing field. More research is required to rigorously evaluate the specific educational benefits of these interventions. This archive of hyperlinked tools can be used as a resource for all levels of medical trainees, providers, and educators.

Title: Operating room (OR) based learning: Exploring relative value of factors affecting student learning experience

Introduction: Learning in the operating room (OR), also known as the operating theater, is one of the hallmarks of undergraduate surgical education (Nagraj, Wall, & Jones, 2007). Students worldwide attend surgical “attachments”, “clerkships”, and “firms” during their clinical training. So-called “theater-based learning” or “OR Based Learning” offers a unique learning resource with exposure to surgical pathology and technical aspects of surgery, whilst providing opportunities to observe nontechnical skills, such as teamwork, communication, and decision making (Cloyd et al., 2008).

Operation Theater is a dynamic, high-pressure setting where work-place based learning is challenging, all within an unfamiliar environment for students to acquire knowledge (Dornan, Boshuizen, King, & Scherpbier, 2007). Traditionally teaching and learning has thus remained challenging in OR and to a certain extent suboptimal for the students (Croghan, Phillips, & Howson, 2019).

Problem: Operation theater based student learning is influenced by a number of factors which likely include emotional,
socio-environmental, organizational factors and factors related to educational relevance and surgical educator (Berman, Rosenthal, Curry, Evans, & Gusberg, 2008; Hexter, O’Dowd-Booth, & Hunter, 2019; Irani et al., 2010; Lee, Montague, & Hussain, 2005; McIntyre, Monahan, Villegas, Doyle, & Jones, 2008; Shetty, Zevin, Grantcharov, Roberts, & Duffy, 2014; Stone, Charette, McPhalen, & Temple-Oberle, 2015).

Gap: Although number of studies have individually examined role of various factors in OR based student learning; however, their relative importance and influence still remains partially explored (Hexter et al., 2019). Moreover, the quality of evidence to substantiate these aspects still remains contextual with low external validity and generalizability (Croghan et al., 2019; Hexter et al., 2019). Similarly, the student and faculty perspective about these factors still remains unexplored.

Hook: Identification of relative value of these factors influencing OR based student learning remains a high research priority in order to design future structured clinical encounters within OR for more meaningful and enriched learning experience.

Research Question: What is the relative value of factors influencing learning experience of students in operating room environment?

Methodology: Study settings: UOL, Riphah International University, KMU, Shalamar Hospital, Lahore; Study approvals Study would be approved by UOL Advanced Studies and Research Board and ethical Committee. Study Design (Qualitative, Quantitative or Mixed methods): Mixed Method Delphi Study (Which would involve both qualitative and quantitative components) Study Type: Cross Sectional Delphi Study, Study Duration: 3 Months; Inclusion Criteria: 4rth and Final Year Medical Students attending the OR during their rotation (n=15) and Surgical experts with medical education experience (n=15)

Exclusion Criteria: Medical student and Medical Experts who do not consent to participate.

Target population: Undergraduate Medical Students and surgical experts with Medical education experience; Accessible population: Medical Students at Shalamar Medical and Dental College, 4rth and Final Year Students (n=15) and Medical Education Experts (15)

Sample Size: n=15 Medical Students and n=15 Surgical Experts with Medical education experience. (In Delphi studies, the sample size can range from 10-100; however, considering the significant qualitative component, n=15 would be quite appropriate); Sampling Technique/Design (how will you select subjects?): Non-probability Purposive Sampling

Results: Data Collection:

In stage 1, Delphi Questionnaires would be developed for both students and the surgical experts with medical education background. These questionnaires would be validated through a panel of 5 surgical experts with medical education background.

Stage 2 would involve three rounds of data collection through Delphi to explore qualitative data and to generate consensus on the data. For qualitative components thematic analysis would be done and for the quantitative data descriptive statistics would be used. Delphi would be conducted as described previously (Al-eraky, Donkers, Wajid, & Merrienboer, 2014; Massaroli et al., 2018; Trevelyan & Robinson, 2015). Round 2 and 3 would be conducted to generate consensus among the panel members. The consensus would be considered achieved once 80% of the participants on agree on an issue (Trevelyan & Robinson, 2015).

Stage 3 would involve overall data analysis and stage 4 would constitute dissemination following manuscript writing.

Initially two instruments would be developed one for the students attached as Appendix I and Appendix II. These instruments would be validated through a panel of five experts before running the first round of the Delphi study. The instruments would have both qualitative and quantitative components. Delphi would be conducted as described
previously (Al-eraky, Donkers, Wajid, & Merrienboer, 2014; Massaroli et al., 2018; Trevelyan & Robinson, 2015).

Round 2 and 3 would be conducted to generate consensus among the panel members. The consensus would be considered achieved once 80% of the participants agree on an issue (Trevelyan & Robinson, 2015).

Data Analysis Procedure: Detailed description of type of analysis plan according to type of variables and study design, statistical tests (if required), stratification of confounders/effect modifiers, presentation of results etc must be clearly mentioned. In case of qualitative analysis, type and detail of analysis should be given.

Non-Parametric test. Mann Whitteny U Test for Frequencies and percentages.

For qualitative data thematic analysis would be done.

Conclusion: The results would follow the study once conducted.

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**Theme: Teaching & Learning**

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**Title: Simulation-based deliberate practice: Augmentation of clinical skills training in clerkship years of undergraduate curriculum**

Introduction: Time constraints and heavy workplace demands don’t provide our medical students enough opportunity to practice their clinical skills during clerkship postings. Simulation-based deliberate practice offers the opportunity to supplement clinical training and to practice a range of clinical skills through repeated practice in a safe and controlled environment.

Methodology: A systematic review of articles from Google scholar, Medical education and Academic medicine was carried out on the following themes: Role of simulation-based deliberate practice in medical education, basic clinical Skills training at undergraduate level, Patient safety issues, clerkship training, repeated clinical skills practice.

Results: Zone of proximal development in psychomotor skills learning includes guided learning and informative feedback. Simulation offers learner-centered education and encourages students deliberately experiencing and learning from their failures. Contextualized learning has blurred the boundaries between skills laboratory and clinical practice. Deliberate practice was positively correlated with improved OSCE performance of medical students.

Conclusion: I recommend restructuring of existing learning resources and conduct deliberate practice sessions in clinical skills lab. Such sessions can be planned parallel to students’ regular clinical postings. This change in clerkship phase of undergraduate curriculum will improve student performance and allow incorporation of patient safety issues in this curriculum.
Theme: Teaching & Learning
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Title: Workplace learning: Perception of pre-clerkship students of learning experiences in the clinical learning environment with regard to preparedness for student entry, workplace environment, quality of supervision and learning opportunities at Gulf Medical University, UAE.

Introduction: Medical students perceive the clinical workplace as a rich and motivating learning environment. Workplace learning was introduced for pre-clerkship students at Gulf Medical University to facilitate stress-free entry into the clerkship phase. This study intends to explore the students' perception of clinical learning environment (CLE) and identify strengths, weaknesses and areas for improvement.

Methodology: The UCEEM (Undergraduate Clinical Education Environment Measure) questionnaire has been used in this study to assess the social and pedagogical dimensions of the clinical learning environment from the students' perspective. It has been proven to be valid, reliable and feasible instrument to evaluate clinical learning environment for undergraduate medical students.

Results: The questionnaire items were categorized into four major domains:

Preparedness for student entry, workplace environment, quality of supervision and learning opportunities. The average satisfaction level of students regarding the quality of supervision is better than the workplace environment and learning opportunities provided. It can be illustrated with the help of graphs.

Conclusion: UCEEM can be used as a baseline measurement which can be used to compare the subsequent evaluations and a follow-up on the steps that would be taken to improve the Clinical Learning Environment. We can substantiate our findings by using focus group discussions to further improve the workplace learning environment.

Theme: Teaching & Learning
Name: Mohammad Idrees
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Title: E-learning: knowledge, attitude and practice among undergraduates of a medical college of Khyber Pakhtunkhwa.

Introduction: E-Learning is one of the promising medium to gain information. It is a flexible system with a vast number of advantages. This study was done to determine the usefulness and effectiveness of e-learning among the students of MBBS.

Methodology: A cross-sectional study was conducted among 184 students of Rehman medical college during the months of December 2018-May 2019. Data was collected through self-administered questionnaires by simple random sampling technique. Data was entered and analyzed through SPSS 22.

Results: students who were aware of e-learning were 90.80%. It was noticed that the use of laptop, computer, and Mobile phone was statistically higher in first year MBBS students with a p-value of 0.018. Student did not show statistically significant results for content learned through e-learning with a p-value of 0.063. Different resources were used for e-learning in which Videos had the highest percentage (87.60%) and audios been used as the least
resource for e-learning (29.20%). On a daily basis, 56% of the students use e-learning for 1 hour or less and only a 3% of the students used it for more than 4 hours.

Conclusion: Majority of the undergraduate medical students were aware of concept of E-Learning, this shows a significant increase in Awareness as compared to other conducted studies.

Theme: Teaching & Learning
Name: Muhammad Mustehsan Bashir
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Title: Exploiting the power of gamification in journal club

Introduction: One of the commonly used teaching-learning activities in medical education is the oral presentation of a published research article, commonly referred to as a “journal club”. Although journal club has the potential to be a productive, interactive, and even enjoyable experience, many see it as an obligation with little participant engagement or personal growth potential. Different approaches to journal club have evolved to encourage individual engagement and participation, but they usually remain very close to the classic approach and retain its shortfalls. Gamification as a student-centered pedagogical strategy has been introduced to replace conventional pedagogies. Studies of the effects of gamification on student engagement in higher education are scant; this reality is even more accentuated in medical education. Available studies suggest that gamification might or might not work. Therefore, objectives of current literature search are twofold: (1) to systematically find, appraise and compose the best available evidence regarding the evolution of journal club activity in graduate medical education and application of different strategies on increasing participants’ engagement in the activity and (2) to describe student engagement, gamification and effect of different design elements of gamification on students’ engagement.

Methodology: Following key words were selected for the literature search.
- Journal club
- Gamification
- Student engagement
- Game elements

Following search engines were used to conduct the literature search:
- PUBMED
- ERIC
- Google Scholar

In order to refine the literature search and bring focus to it, zoom in and Zoom out approach was used. In this approach, different combinations of Mesh terms with appropriate Boolean operation were used.

Twenty articles were selected for final review using PRISMA guidelines.

Results: Despite incorporation of best practices for journal club in residency education, the mean attendance is typically 60% for many programs. Conventional models of journal club, disengage, alienate and stifle resident learning. Residents’ disengagement compromises the inculcation of critical thinking skills. The challenge to broaden the range of instructional strategies over and above the conventional pedagogies is colossal. Gamification as a student-centered pedagogical strategy has been introduced to confront the challenge. Gamification is defined as application of principles, philosophy, emotions and appearances originating from games in order to engage and motivate people to help them learn and solve problems. Gamification involves the deployment of game elements
in an environment outside of digital games and may increase engagement among learners. Studies of the effects of gamification on student engagement in higher education are scant; this reality is even more accentuated in medical education. Available studies suggest that gamification might or might not work.

Conclusion: The mixed effectiveness of gamification in supporting engagement and improving educational outcomes could be explained by the highly variable DEs found in gamification. Keeping in mind the fact that majority of the studies done to date have not tried to examine the effect of combinations of different design elements on student engagement, further research is needed to understand this basic concept. Proposed research is aimed to explore how two different gamification designs (leader board versus badges) can affect the students’ engagement in online journal club learning activities. This study will add to the body of literature dealing with the effects of gamification in higher medical education, and as such it will contribute to understand the effects of this modern pedagogy on learning in medical education.

Theme: Teaching & Learning
Name: Sumera Nisar
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Title: Procedural shortcomings of Peer Assisted Learning (PAL) in clinical skills training of Ophthalmology module

Introduction: Peer Assisted Learning (PAL) is an important known feature of medical curriculum (Furmedge, Iwata, & Gill, 2014)(Malick, 2005). It effectively engages the students in their learning and leads to effective academic gains by learning from more knowledgeable peer. More knowledgeable peer facilitates discussions and clinical skills teaching sessions to help the transition of less knowledgeable students into more knowledgeable and skilled professional (Castelyn, 2018). This create an atmosphere of learning that helps every learner's skills and abilities.

It promotes a supportive classroom atmosphere as well, starts with small supportive groups, helps to integrate basic and clinical knowledge and includes time for independent work. By this practice of peer assisted learning, acquisition of knowledge and skill takes place through active helping and support among status equal or year specific matched companions (Alvarez et al., 2017).

Receiving and learning inappropriate or wrong skills and poorly conducted PAL sessions can cause negative effects on students learning and creates a negative impact of PAL. Poorly conducted sessions can also create a sense of disinterest and lack of satisfaction among students. Disinterest and lack of satisfaction can lead to poor academic performance and clinical skills. Many studies have been carried out on the effectivity of PAL, its benefits, role and benefits of PAL to peer tutor, benefits of PAL to tutees but very few studies are there in the literature about the procedural or operational shortcomings of the PAL.

This study is aimed to identify the procedural shortcomings of PAL sessions while teaching the clinical skills in undergraduate medical students.

Methodology: Search Strategy: The search strategy described and elaborated by Hammick and Haig was utilized to devise a data search plan. An electronic database search was carried out between September and October 2019 using various search engines like PubMed, Eric, Ovid, Medline and Google Scholar. Various search terms were used to improve the sensitivity of the results.

Inclusion criteria: The inclusion criteria covered almost all the areas of the research question. The following criterion points were strictly followed:
• Full Text Journal articles.
• Peer-Reviewed Journals published in English Language.
• Articles with key words PAL, benefits of PAL, Role of tutor and tutee, perspective of tutees about PAL and procedural shortcomings were selected.

The search was not restricted by the study designs and geographical placement. Qualitative, quantitative and mixed method research were all reviewed and included.

Exclusion Criteria
• Duplicated articles.
• Non-specific articles.
• Journal forewords.
• Running commentaries.

Search Terms: Various key words and terms were used to search the above-mentioned data bases. Search techniques used were:
• Key words
• Boolean search with use of [AND] and [OR] were used to combine search strings.

Results: After extracting and selecting the specific articles from different data bases, exclusion and inclusion criteria was applied and about 11 articles were selected to be included in the literature review and critical appraisal. The following flow chart represents the systemic literature search along with the application of inclusion and exclusion criteria as per the protocol of the PRISMA-P: Preferred Reported Items for Systemic Review and Meta-Analysis.

The articles are aligned in a sequence from the knowing about peer assisted learning to its benefits for the students and staff. Then articles on the role of tutor and the perspective or experience of the tutees are arranged to know more about the experience of the students about this learning strategy. At the end the articles showing the importance of PAL in clinical skill teachings are included. The literature search did not find any article on the shortcomings or procedural shortcomings of the PAL.

Helping someone with a skill sharpens it in your own mind.

*There was no or related article found about the shortcomings or challenges of PAL.

Following themes emerged from the critical appraisal of the articles that will be discussed in the discussion section.
1. PAL is an effective and efficient tool for active learning in medical students
2. Acceptance of PAL is extraordinarily high among tutees
3. Developing a tutor pool is needed to select and train the ideal peer tutor
4. Formal training of the tutor is an essential but laborious part of PAL
5. Doubts about peer tutor content knowledge and skill are still there
6. Clinical skill learning is a complex task and can pose challenges in the PAL sessions
7. Ethical concerns about PAL during clinical skill training
8. Non-cognitive elements of PAL e.g. scheduling, timing, behaviors can affect learning
9. More research needed on the procedural shortcomings or challenges of PAL

Conclusion: It has been observed that although there is lot of work done on the effectivity of PAL, its benefits, role of tutors and tutees, significance of PAL in clinical skills training in skill labs; there is very limited data available on the shortcomings of PAL especially procedural shortcomings. The procedural shortcomings could be in terms of timing,
scheduling, lack of structure or format, preparation of sessions, lack of instant feedback on the performance in clinical skill training. The phenomenon has not been explored theoretically and is in dire need of investigations in order to enhance the effectiveness of this teaching technique especially in learning the clinical skills.

This study can also help to pave the way to include PAL as an effective teaching strategy in our curriculum.

Theme: Teaching & Learning
Name: Attyia Rashid
Email: khaqankhaqan81@gmail.com
Title: Impact on student engagement if facilitator behaves as simulated patient in PBL

Introduction: Problem-based learning (PBL) is a well-established teaching strategy in medical education and continues to be developed and explored (Mansur, Kayastha, Makaju, & Dongol, 2012). The students learn about the subject by solving the relevant real-life problems through higher order critical thinking and brainstorming of prior knowledge. PBL has become a prominent pedagogical identity in the current modern research era. Different aspects related to the process of PBL, tutor’s role and unpredictable learning outcomes due to some grey areas in PBL are major interests for the researchers (Jin & Bridges, 2014). To engage the students is the major goal of all the educators in student centered and small group learning strategies (Rotgans & Schmidt, 2011). But literature shows that PBL session conduction and facilitation sometimes becomes difficult due to disengagement of students, information overload and undirected learning as it is a long process (Salam et al., 2009).

Current trends in research have proved that introduction of different educational strategies can improve the learning of students due to enhanced engagement in PBL. These educational technologies have been trialed in medicine and dentistry. Most of them, improves the engagement level of the students, but cannot prove to improve the understanding and learning outcome effectively in clinical setting.

It is a big challenge to connect the somewhat abstract nature of classroom-based PBL with clinical practice and to maintain learner engagement in the process of PBL over time (Chuan et al., 2011). One of the strongest argument which was expressed from faculty groups was that PBL should not be used as the sole method of instruction and that students need a solid foundation in the subject prior to engaging in PBL as this deficiency also lead to disengagement (Abdelkarim, Schween, & Ford, 2018).

The reason behind can be that tutors/facilitators are not actively involved in the process of PBL. Their role modelling is missing (Chng, Yew, & Schmidt, 2015) (Chng et al., 2015). As students have come from traditional system that was teacher centered and tutor used to behave as a hero and role model. Students are tuned to see the teacher in that active role to keep them involved. The aim of my study is to observe the impact on student engagement if facilitator/tutor changes his role and behaves as a simulated patient in PBL. No authentic literature is available regarding change of role of facilitator in PBL as simulated patient according to the scenario to improve the engagement level of students.

No doubt, simulated patient-based education is widely accepted as a valuable and effective means of teaching (Wimmer et al., 2014). I will observe the impact in my study that how effectively facilitator can engage the students to improve the learning outcomes of students if he or she behaves as patient according to scenario of PBL. It seems to be cost effective and more feasible. It is expected that this will increase not just enhance student engagement but also facilitators engagement, who will be able to assess and give feedback to the students better.
Methodology: Search Engines: The literature Search was conducted by the following search engines:

- PUBMED
- Google Scholar
- ERIC

As it is impossible to review all the resources so these search engines are used

Selection of Articles:

Articles Selected:

- Qualitative and Quantitative Studies both included
- Meta-analysis
- Systemic reviews
- Papers

Full text articles on simulation in PBL and role of facilitator in PBL to improve the engagement of students.

Filter used:

- Customize range since 2015
- Full text articles

Results: SELECTION THROUGH PRISMA

Conclusion: Concluding from the above discussions, neither role of facilitator nor importance of simulation can be overlooked. As it is the era of PBL, whole world is working on problem-based teaching strategy to achieve the best learning outcome from the students. Although, systematic reviews highlighted certain limitations of PBL like long process which lead to loss of student engagement especially in the second half of the cycle. There are many studies which help us to face these challenges, solution is also described in different studies like use of simulations, scaffolding, role changes, videos, flipped class and role plays. Nowadays use of virtual patients or web patients also replaces the linear cases (Poulton et al., 2014).

Teacher,s role modelling is also very important in boosting of attention and engagement. That can be as a teacher or as a patient to enhance the motivation. It is the art of teacher how to motivate students intrinsically or extrinsically. Motivated students can perform better.

The intentions of my research are to look for a way to involve the students of MBBS basics sciences during PBL in abstract nature of problem scenarios by incorporating both roles of teacher and student in a simulated facilitator. Studies highlighted the role of simulated patients and facilitators. However, my literature search could not identify any study in which facilitator behaves as simulated patient. Tutor’s involvement and dedication in helping the students of PBL by behaving like a simulated patient in specific cases can prove to achieve improved outcomes on learning and in turn patient care. I intend to expect that students which are deprived of inspirational role of teacher in PBL, will maintain their interest and motivation with the help of simulated facilitator.
Title: Attitude of medical students towards patient safety – A comparison between annual and module system

Introduction: Patient safety is an essential healthcare discipline that has reduced rate and effects of adverse events. The aim of this study was to compare attitude towards patient safety of medical students studying in annual system with module system.

Methodology: This cross-sectional study was conducted for a period of 6 months in Rawalpindi Medical University (RMU) after ethical approval from Institutional Research Forum of RMU. A total of 400 medical students of RMU were included in this study using Randomized Stratified Sampling Technique. Out of total 400 sample size, 200 (50%) were included from Annual while 200 (50%) from Module System. A validated questionnaire Attitude towards Patient Safety Questionnaire (APSQ-III) was administered. Variables like gender, year of study, mode of teaching and responses to questions were noted. Data was entered and analyzed using SPSS v20 and descriptive statistics were applied.

Results: Overall Mean score of included medical students was 87.70±19.41 for positively structured questions, 32.30±6.29 for negatively structured questions. Mean Score of students with Annual System was 78.76±17.96 for positively structured questions while 31.66±6.27 for negatively structured questions. Mean score of students with Module system was 97.06±16.26 for positively structure questions while 32.96±6.26 for negatively structured questions. Difference in mean scores between Annual and Module system was statistically significant with p=<0.000 and 0.041 respectively for positively and negatively structured questions.

Conclusion: Attitude of medical students studying in Module system towards patients was better than students studying in Annual system.

Title: Changes required in the contemporary dental curriculum

Introduction: Curriculum serves as the foundation stone of any program. Dental curricular reforms are still in infancy. Moreover, other countries have moved beyond curriculum towards national standards. PMDC Revised Undergraduate Dental Curriculum 2003 is deficient in many aspects and it is high time to incorporate recommended changes from different experts in the field.

Methodology: This was a qualitative research project in which 13 dental faculty members with postgraduate degrees in Medical/Dental Education in addition to the Dental Specialties participated. The faculty members working at the level of Assistant Professor and above in different dental teaching institutes across the country were selected via purposive sampling technique for semi-structured interviews. Manual thematic analysis was carried out to analyze the data.
Results: A total of 13 participants included in the study reported that many new subjects need to be incorporated. A uniform curriculum all over the country is required. The content of medical and surgical subjects needs to be aligned to dental and maxillofacial region related themes. Need analysis is to be carried out at PM&DC level for what sort of General Dentists are to be produced in the country who can later work in other parts of the world, if they desire.

Conclusion: Changing the Nomenclature from BDS to DDS or increasing the years of education from 4 to 5 is not going to make the difference unless and until the course content is aligned with the rest of the world and teaching methodologies are practiced according to the local needs at par with the recommendations of Medical/Dental Education. A number of changes need to be introduced in the present so-called Curriculum.

Theme: Curriculum
Name: Shabana Chaudhry
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Title: Preparing the next generation of medical professionals for future

Introduction: In the current geopolitical scenario, rapidly changing political tensions in the territory have put us in the center of an emerging conflict zone. The situation is augmented by the recent earthquake in the country's northern parts. We are well aware that such protracted crisis greatly burdened many areas of society including the healthcare system and education. We need to develop a self-sufficient local health system to manage the issues, risks, injuries and diseases that arise due to the protracted crisis. The current study was carried out with the aim of determining the required skills of a physician to define and establish the necessary training module.

Methodology: The study is a quantitative research. The study population included doctors working at both senior and junior level in different specialties in both public and private sector hospitals and universities of Lahore, Pakistan. For data collection, questionnaire was designed. The participants were asked 25 questions to determine the maximum and minimum physicians’ abilities and responsibilities required dealing with the protracted crisis.

Results: Based on the results, 90% to 96% of the participants are familiar with upcoming territorial conflict. Only 33% shows some level of concern related to the situation. Fourteen (46.66%) participants rated their preparedness up to ‘moderately adequate’ to both armed conflict and natural disaster. All the participants agreed that building up of local human resources would be helpful in reducing the dependency on foreign assistance in provision of adequate medical support in the time of crisis. Only 11 participants preferred the military medicine module as a compulsory complete module at undergraduate level. All agreed that the module should include First aid training along with minimum 18 other competences.

Conclusion: We can conclude that inclusion of a military module in undergraduate curricula is a need of the time and to achieve the targeted important skills and capabilities military medicine module should be a part of an undergraduate educational program.

Theme: Curriculum
Name: Asma Rasheed
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Title: Effects of hidden curriculum on students learning

Introduction: Problem: Faculty members and students are often not aware of the existence of the hidden curriculum,
which affects the student’s personal and professional development, learning and behavior (Rajput, Mookerjee, & Cagande, 2017). There are many controversial issues within educational circles and students receive conflicting messages in the process of everyday school life (Neve & Collett, 2018). Hidden curriculum issues are core to professional practice but difficult to teach yet (Kerr, Reilly, Mj, Simulation-based, & Wilkinson, 2016).

Gap: In literature review, limited studies were evaluating the effects of hidden curriculum on student’s learning, their personal and professional behavior. So there is need to search and ponder the effects of hidden curriculum on students learning (Sciences & Publications, 2013).

Hook: Education is not the piling on the data, facts, information, skills and abilities that’s train or instruct but is rather to make it visible what is hidden as a seed like something can be hidden in a sense of a cure of cancer is hidden by someone or in a sense in which a penny in the game hide the penny is hidden. In our educational system, is the curriculum yet to be discovered or has it been hidden by someone? (Gaufberg, Batalden, & Sands, 2010) The curriculum remains hidden until faculty and students get aware of it. Hidden curriculum refers to the unarticulated learning that occurs outside the formal and taught curriculum. It is not documented but inferred by learners rather than delivered intentionally by faculty. It is the sum of the values, cultures, safety practices, and organizational structures within school that causes it to function and react in particular ways (Verdonk, 2015).

The main importance of this study is to call for thoughtfulness in students what is happening in classrooms and medical schools. How educational environment and values affects students learning and behavior through hidden curriculum and special measures should be taken to minimize them. I started with no predetermined thesis about hidden curriculum but wish to end with an emerged synthesis of strategies which can help institutes to minimize the negative effects of hidden curriculum on their students (Blasco, 2012).

Methodology: Study settings: University College of medicine and dentistry, UOL

Study approvals: Will be taken from ethical review board (ERB) and Institutional Review board (IRB) of UCM/UOL

Study Design: Qualitative study

Study Type: Phenomenology type of qualitative (Sosu, 2016)

Study Duration: Six months after approval of research proposal

Sampling Issues:

1. Target population: All MBBS students in UCM/UOL

2. Accessible population: Key informants of 1, 2, 3, 4, 5th year MBBS students in UCM (2 students from each class 1st to final year MBBS) (Sim et al., 2018)

3. Sample Size: 10-14 students (small sample size till point of saturation) sample of 10 students and 4 for further saturation point (Moser & Korstjens, 2018)

4. Sampling Technique/Design: Nonprobability sampling (Purposive sampling technique). I planned to conduct one Focus group discussion of students and Formal interviews from 10-12 faculty members.

Inclusion Criteria: Faculty members Assistant professors and above of UCM/UOL

- Faculty having working experience of at least 3 year in UCM, UOL
- Students age more than 18 years (eligible for giving consent legally).
- Two Students of MBBS from each year (Alsubaie, 2015)
Exclusion Criteria: Students with attendance less than 75% during current academic year (students is regularly and properly exposed to academic environment), demonstrators, faculty having working experience of less than 3 years (Norlyk, 2014).

Instrumentation:

For this study I would like to do Focus group discussion with students, formal structured interviews with 10-12 faculty members. Before this I would like to do pilot study.

Results: Awaited

Conclusion: Awaited

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**Theme:** Assessment

**Name:** Samina Malik

**Email:** drsemymalik58@gmail.com

**Title:** Impact of MARSI on assessment scores among medical undergraduates with English as a second language: An interventional study

Introduction: Importance of metacognition is highlighted by current cognitive approaches. Awareness of one's own learning process and its control is facilitated by learning how to learn. Weak construct validity of Metacognitive Awareness of Reading Strategy Inventory (MARSI), shown by some, suggests that its existing form is not appropriate beyond 12th grade students, as they acquire reading proficiency.

Objective: To establish the construct validity of MARSI in 13th and 14th grade students with English as a second language (L2) and to evaluate its impact over assessment score.

Methodology: Construct validity of MARSI was tested randomly by involving 24 medical students of 1st and 2nd year each (with English as L2), and its convergent validity with reading comprehension ability was investigated against their quantitative scores in early and late session exams in a private medical school as an interventional approach.

Results: Significant improvement in result was seen in 1st and 2nd year medical undergraduates after intervention by MARSI, though improvement in score of first year students was significantly higher. Among individual reading strategies, significant increase in Global strategies was seen in only 1st year students. There was no significant change in Problem solving strategies in 1st as well as 2nd year students, but significant improvement in support strategies in 2nd year students only.

Conclusion: Performance of 1st and 2nd year L2 English students in theory exams can be significantly improved by MARSI intervention. More focus is needed to improve problem solving strategies than the other reading strategies that may contribute to further improvement.

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**Theme:** Assessment

**Name:** Muhammad Haroon Hamid

**Email:** haroonr5@yahoo.com

**Title:** Assessment of improvement in the knowledge of IMNCI content among the participants of 6-day IMNCI training program

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32 | Oral Presentation Abstract Book
Introduction: Integrated Management of Childhood Illness (IMNCI), taught by 6-days training course, is an important initiative to decrease childhood mortality. Level 2 of Kirkpatrick Model entails assessment of the learning achieved by training activity.

Objective: To assess improvement in the knowledge of IMNCI content among the participants of 6-day IMNCI training program.

Methodology: After taking approval from IRB, this Qausi-experimental study was carried out in the Pediatric Medicine Department, KEMU / Mayo Hospital Lahore over a period of 3 months. By non-probability consecutive sampling, all 77 participants of three 6-day courses (with no previous formal training of IMNCI) were included in the study. To assess any improvement in the knowledge (Kirkpatrick Model Level 2), each participant filled a pre-test and a post-test after the training. Data was analyzed by SPSS software. As the data was not normally distributed, non-parametric test – Wilcoxon test was applied to compare the overall mean scores of pre-test and post-test. Kruskal-Wallis Test was applied for overall comparison of the mean scores of pre-test and post-test between the groups. While Mann Whitney U-test was applied for pairwise comparison of the mean pre-test and mean post-test scores between different pairs of participant groups. Cronbach’s alpha was applied to determine the reliability of assessment tool.

Results: Of the 77 participants there were 35 doctors, 20 nurses, 20 LHVs and 2 midwives, with a 100% response rate. The overall mean score of pre-tests was 3.43 (+ 1.56) and 7.65 (+ 1.48) for post-test (p-value < 0.001). Except for the midwives, there was statistically significant improvement in the mean scores of each group. Item-analysis of the questions showed that compared to the pre-test, the proportion of correct answers in the post-test showed statistically significant improvement for all the 10 questions. Pairwise comparison of the mean pre-test and mean post-test scores between different participant groups did not show statistical significance except for the doctor-nurse pair. Cronbach's alpha was 0.391, showing poor reliability of assessment tool.

Conclusion: IMNCI training program significantly increased the knowledge of health care providers with no statistical difference between the post-test scores of doctors, LHVs and midwives.

Theme: Assessment
Name: Zakia Saleem
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Title: Assessments of dental students’ entrepreneurial self-efficacy to aid practice management

Introduction: A dental graduate face difficulties in establishing his private setup after graduation. It is essential to introduce entrepreneurial content in undergraduate education. The efficacy of students to launch their practice is known as Entrepreneurial self-efficacy (ESE). This study is aimed to asses ESE in order to implement practice management education.

Methodology: A quantitative study was conducted in Lahore by selecting two dental colleges i.e. UCD, University of Lahore and DE’ Montmorency College of Dentistry, Lahore. A Pre-validated questionnaire was used that contains 17 items. Descriptive statistics were performed. Results were analyzed using SPSS version 23.

Results: A total of 216 students participated in the dental colleges involved in the study. Mean score of Entrepreneurial Efficacy was 5.1.

Conclusion: There is a need to introduce entrepreneurial education at the undergraduate level to strengthen the practice management skills of our dental graduates.
Introduction:
It is internationally recognized that depression and anxiety are raising problem that reflect the mental health of a population. Medical education is considered stressful as since it is creating many psychological and social changes among students. Previous research conducted in many countries have shown that medical students are more likely to experience anxiety and depression during their studies. It is estimated that between 15 and 25% of medical students experience some type of psychiatric discomfort while training in a medical college. It has been reported that patients have experienced stress due to academic demands, examinations, inability to manage them feelings of helplessness, increased mental pressure, psychological tensions and excessive workload. In the medical field, students need to store large amounts of courses, due to shortage of time to review the course and exams is considered the main indicator of stress.

Mostly students do not receive personal satisfaction without reviewing many subjects due to the additional burden on the course material. This leads to the emotions of a sharp dermic. Therefore, some students struggle with applications, depending on their ability to meet the requirements of the medical curriculum.

Methodology: It was a cross-sectional descriptive survey at Central Park Medical College Lahore (CPMC). The approval for this study was granted by both the University of Lahore and Central Park Medical College Lahore. All students of 4 batches at CPMC were included in the study. An informed consensus was obtained from all participants after confirming their confidentiality. The data was analyzed by SPSS 20.00, Independent t- test and chi- square test was applied.

The average anxiety level on Visual Analogue Scale (VAS) was evaluated as 62.21 ± 23.01. Total no of student was 300 Female participants were 165(55%), students showed mild 34(11.33%), 141(47%)moderate and 41.67% with maximum anxiety level with the mean of anxiety score 62.18±SD 22.95

Results: Demographic and baseline information about the students including their age, gender and professional year of study. The mean age student was 22.14± 2.44 years with range from 17-28 years. There were 165(55%) female and male was 135(45%). Results distributed at three levels of anxiety among male and female students. A total of 11.3% of students showed little anxiety level during exams while 14.8% male students showed, 47% showed moderate anxiety, and 41.7% showed maximum anxiety levels. The level of anxiety among female student is significantly high.

Conclusion: Exam-related anxiety does exist and deteriorate the overall results of students to a considerable degree. Exam fear is common among medical students. Exam anxiety is considered a major problem in medical students because it affects mental well-being. Counseling services and stress management programs should be initiated and implemented as fully as possible. After all, the success of a student is the success of the institution and the medical profession.
Title: Health disparities in 6-9 years old Pakistani school going children

Introduction: Gaining support from cognitive developmental theory by Jean Piaget, the study explains the role of parents and peers in developing children oral hygiene habits, thus improving the quality of life of our vulnerable population.

The purpose of this study was to assess the oral health status of 6-9 years old school going children and to investigate the mediating role of oral hygiene between disparity and oral health.

Methodology: The study was correlational type of study, using convenience sampling technique data were collected from 30 school children belonging to urban and rural areas across the twin cities of Pakistan. The survey was based on WHO, oral assessment form for children 2015.

Results: Evaluation of the oral health status revealed that poor oral hygiene habits were more prevalent in those schoolchildren whose parents had no or little educational background and oral hygiene played significant mediating role between disparity and oral health status of children

Conclusion: At an early age, greatest need of dental health education including proper instruction of oral hygiene practices and school based preventive programs, would help children in improving preventive dental behavior and attitude which is beneficial for their lifetime.

Title: Application of blockchain in healthcare and medical education

Introduction: Using Blockchain technology to manage data related to healthcare delivery systems, including hospitals and Medical education related data can prove to be revolutionary in terms of streamlining and transparency of the information.

Methodology: Blockchain is a decentralized database (ledger) that stores a registry of assets and transactions across a peer-to-peer computer network acting as a public registry of ownership and transactions, which is secured through cryptography, and over time, its history gets locked in blocks of data that are then cryptographically linked together and secured. This creates an immutable unforgettable record of all transactions. This record is replicated on every computer that uses the network.

Results: The applicability of Blockchain technology covers a wide range of domains. Many new applications have been developed using this technology. This study provides a comprehensive review of the emerging new opportunities regarding its application in healthcare systems and Medical education departments.

Conclusion: Blockchain and Smart Contract technologies help improve learning and develop personalized learning. It can be a revolution and a boon for technologies related to the field of education.
Title: Assessing the learning environment of major Specialty PGRs in a tertiary care hospital by Health Education Learning Environment Survey (HELES)

Introduction: There are many surveys available to quantify educational climate of PGRs, but these are lacking in validity & theoretical background. Health education learning environment survey (HELES) with 35 questions in six sub scales are used in undergraduates with good results.

Study Objective was to quantify health education learning environment of our PGRs of FCPS/MS/MD in Surgery, Medicine and Gynae & Obs in a tertiary care hospital by using HELES tool. This quantification will help Supervisors, Hospital administrators to monitor their programs, suggest and bring improvement.

Methodology: A cross sectional study, done in SIMS Lahore from 10th Sep to 1st Oct 2019. 90 residents in FCPS/MS/MD program with 30 each from Surgery, Medicine and Gynae & Obstetrics were selected. A predesigned HELES proforma with 3 main dimensions was used. For reference; In "Personal development" a mean score of >34, in "Relationship" and in "System maintenance" a mean score of >48 & above was taken as positive.

Results: There were 57 (63.3%) males & 33 (36.7%) females with a mean age of 27.4 ± 3.6 years. The mean score of all PGRs in Surgery, Medicine and Gynae & Obs in the three dimensions was below the average values, showing our PGRs are not content with their learning environment. The comparison of means among different specialties was significant (p=0.02). PGR response with their year of training was significant with a p value of < 0.05.

Conclusion: PGRs in the 3 major specialties were dissatisfied with their health education learning environment. Maximum were discontent in Relationship dimension especially in Faculty relationship factor, then in System maintenance and then in Personal development dimension. Residents of Gynae & Obstetrics exhibited significantly low score in System Maintenance dimension.

Title: Perception and knowledge of dentists towards gifts from pharmaceutical industry

Introduction: Pharmaceutical promotion activities in low- and middle-income countries are neither regulated not monitored in literature, the acceptance of gifts from pharmaceutical industries is not appreciated but some of the articles suggests that smaller gifts can be accepted. Awareness of the ethical implications of these interactions has not been highlighted in dentistry. Aim to ascertain the perception and knowledge of dentists towards gifts from pharmaceutical investors and awareness towards any kind of favor for promoting their drugs in returns among different institutions.
Methodology: A cross-sectional study including sample size of 256 participants was done in different dental institutions based on questionnaire which consisted of 7 questions regarding various aspects of acceptance of gifts and favors from pharmaceutical companies.

Results: Results showed 63% of the dentists are willing to accept small gifts while 42% considered acceptance of gifts ethically right, 73% were interested in getting discounts for dental conference registrations, females had more acceptance towards gifts and favors with a percentage of 71.8%.

Conclusion: The findings raise a question asking for changes to be made to the industry Code of Conduct and professional medical guidelines on ethical relationship between Dentist and the industry.

KEYWORDS: ethical implications, pharmaceutical industries, code of conduct, favors.

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Theme: Research

Name: Sarah Hamid
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Title: Workplace bullying and perceived coworker social support: A time lag study

Introduction: The research by gaining support from transformational and chaos theories intends to explain the impact of workplace bullying on employees' outcomes of dental profession, investigating the moderating role of perceived co-worker social support and the intensity of its impact on the relationship between workplace bullying and employee's outcomes.

Methodology: By using convenience sampling technique, in descriptive and causal type of the study, data from the sample of 267 dental professionals were collected, in two time-lags.

Results: The findings of the study indicated that the workplace bullying is associated with job stress, turnover intention and job performance. Perceived co-worker social support is associated with job performance and organizational citizenship behavior of an employee. Perceived co-workers social support plays a significant role in weakening the relationship between workplace bullying and turnover intention and Job performance. Yet, it fails to play a significant role in diminishing the deleterious association between workplace bullying and job stress.

Conclusion: The issue should be taken more seriously and brought to the surface by properly guiding medical students teaching them ways to overcome challenges faced by aftermath of workplace bullying, anti-bullying policies should be communicated and the importance of fellows to encourage their colleagues to report the deleterious act should not be ignored.
Title: Educational environment at Khawaja Mohammad Safdar medical college, Sialkot

Introduction: Educational environment in any institution is an important concern to debate, as it plays a vital role in governing students' academic achievement. The objective of my study was to determine students' perceptions of educational environment at Khawaja Mohammad Safdar Medical College Sialkot.

Methodology: A cross-sectional, descriptive, questionnaire-based study was conducted in which undergraduate students of all five years were analysed. 50-item DREEM Questionnaire was used and scoring was based on a 5-point Likert scale. Data was analyzed by using SPSS v 25. Obtained score were expressed as mean ±SD.

Results: Total mean score is 114/200 (57%) which is more positive than negative. Mean score for Students perception of Learning is 28/48, Students perception of Teachers 25/32, Students academic self-perception 20/28, Perceptions of atmosphere 27/48, and Students social self-perception is 16/28.

There were four problem areas item no.1 (I am encouraged to participate in teaching sessions)(1.78), item no.8 (course organizers ridicule their students)(1.42), item no.35 (I find experience disappointing)(1.76) and item no.3 (there is a good support system for students who get stressed)(1.25) all with means 2.

Conclusion: The overall educational environment was more positive than negative, however there are a few problematic areas that need to be further explored and measures taken to make the environment more favorable for learning.

Theme: Research

Title: Literature search: Effect of postgraduate medical education qualification on the medical educational practices

Introduction: College of Physicians and Surgeons Pakistan established Department of Medical Education in 1979, as a 'National Teacher Training Center'. Moreover, CPSP started a diploma course in 2004 and master's program in 2009. The number of Master's in Health Professions Education (MHPE) programs in Pakistan increased from 01 in 2009 to 05 in 2014 (Syed Aly, Pak, & Assoc, 2016). The aim of the program was to produce knowledgeable and practicing medical educationists. Later Medical Education programs were started in Agha Khan University, Khyber Medical University, Riphah University and University of Health Sciences. There are three types of postgraduate training programs being run including Certificate, Diploma and Masters Programs. Few universities are aspiring to start a PhD in Medical Education. But the efficacy and change in behavior after gaining the qualification has not been widely evaluated. There is little work done on this subject and we have done a literature review to find out the effects of qualifications on educational practices.

Methodology: A literature review was carried out by systematic analysis of professionalism as a medical teacher in accordance with the Best Evidence Medical Education (BEME) guidelines (Haig and Dozier, 2003a, 2003b). Literature review was carried out electronically google scholar and Medline. Different keywords were searched, and results were 1158 for Medical Education qualification, 68 for Medical Education Qualification and Effects, 894 for Medical Education and Professional Identity and 7 for Medical Education Qualification and Professional Identity. Moreover,
Participants pursuing Medical Education come from diverse backgrounds. Both internal and external motivating factors were found important for opting medical education qualification. Some doctors are self-determined and motivated to learn.

Results: Qualifications in Medical Education have a positive impact on the graduates’ personal and professional development. Qualified Medical Educators felt that their education increased self-efficacy and better position in the society. Medical educators in the capacity of researcher, teacher, leader and reformer developed positive changes. Qualifications improved the educational practices. It was also found out that the higher the qualification, the higher the impact. Qualifications of the medical education helped people to get higher positions and leadership roles and they proved themselves by demonstrating learning to practice. Both internal and external motivating factors helped the individuals to improve themselves. These qualifications increased their sense of authority and self-efficacy as medical educationists. The apprehensions and challenges were to keep a balance between clinical and educational activities.

Conclusion: Medical education qualifications significantly improve educational practices which are directly proportional to the level of qualification. Experienced teachers having higher baseline capability had more impact in developing educational practices. Individuals having a high level of motivation benefited more.

Theme: Research
Name: Qudsia Nawaz
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Title: FCPS dissertation: An analysis of various barriers to its success in promoting research culture in Pakistan

Introduction: Among many proposals to inculcate research skills in medical students, most emphasized suggestion is actual research itself. This study is aimed to identify evidence of success or otherwise of CPSP’S measures to promote high quality research in the students undergoing FCPS training from its platform in various disciplines.

Methodology: This semi-qualitative cross-sectional survey will be conducted by convenient sampling through Google Forms, interviewing the CPSP’S affiliates, which include Supervisors, fresh graduates and current trainees using a structured questionnaire, to get an idea of the participants’ view regarding the magnitude of the problem, its causes and possible solutions.

Results: The study identified following lapses in dissertation writing, prohibiting high quality research:
- Lack of adequate guidance from supervisors
- Lack of strict time limits on trainees
- Lack of funding

Conclusion: Alternating dissertation with 2 research articles or enhancing its value by introducing thesis defense and later degree equivalence to PHD are viable options. Submission of synopsis should be made more user friendly and
mandatory within first 6 months of training, and supervisors should be held accountable for it.

Title: Depression in relation with students’ perceptions of their learning climate at a Private Medical College

Introduction: The present study was designed to estimate the prevalence of depression among undergraduate medical students and observe its relation with perceptions of students of their learning climate.

Methodology: It was a cross-sectional descriptive study conducted at Lahore medical and dental college (LM&DC). Data was collected by a questionnaire comprising of demographic information and two validated tools; Patient Health Questionnaire-9 (PHQ-9) for screening of depression and Dundee Ready Education Environment (DREEM) inventory to gather students’ perceptions of their environment.

Results: Out of 533 students, 206 (39%) were male and 327 (61%) were female, 213 (40%) were of pre-clinical and 320 (60%) were of clinical academic years. Among the study participants, 399 (75%) were found to be depressed. Out of the depressed students, 255 (64%) were female and 144 (36%) were male. Among the students, 96 (18%) had negative perception of their learning environment and out of these, 91 (95%) were found to be depressed. There was significant association of depression with female gender (p=0.037) and negative perception of the students of their learning climate (p< 0.001).

Conclusion: Majority of the students at LM&DC were found to be depressed and their perceptions of the learning environment were also low ranking; hence affecting their cognitive and learning abilities. There is an emerging need to overcome the mental distress of the students and ease their way out by counselling therapy for better and rewarding outcomes.

Title: Era of artificial intelligence in medicine. Is our medical faculty ready?

Introduction: In the middle of twentieth century, Artificial intelligence emerged as an upcoming and dynamic technology that grabbed the attention of people from every walk of life, and medical field is no exception. The expectations attached with AI with regards to medical field has been on the rise. In light of these expectations medical faculty has also started taking interest in incorporating this technology in medicine both in practice and teaching.

Methodology: Methods:

Databases searched included PubMed and web of Science. Grey literature was searched through Google Scholar with explicit inclusion and exclusion criteria. Full text of the selected articles was reviewed, and themes were identified.

Results: PubMed, Google scholar and web of science were searched. PubMed=total 637 out of which 72 articles were selected, Google scholar= total 17,400 out of which 67 were shortlisted and in science direct total 1740 out of which 15 were selected. After further application of the inclusion and exclusion criteria, 08 articles were finalized.
for review.

Conclusion: AI helps in the early and accurate diagnosis of various life threatening diseases with high certainty and efficiency and the future of health care depends upon further development of AI in Medicine.

Role of AI in education is evident but medical faculty has yet not properly understood the applications of artificial intelligence also there are many challenges in incorporating AI in medical field as revealed in the literature like the use of “black-box” AI systems, where only inputs and outputs of these systems are appreciated, and clinical efficiency and application inquiry are lacking.

The rapid advancement of technology and teaching in higher education urges the necessity of re consideration of teachers' role and future learning styles.

Another very concerning challenge regarding the use of AI In medical practice and teaching is the lack of interest and knowledge regarding the basics of relevant computer use by the Medical professionals.

Undergraduate curriculum should be remodeled to incorporate subjects which prepare future doctors to understand AI and their application in the relevant medical practice.

Theme: Research
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Title: Association between the organizational culture and burnout among the faculty members of a private medical college and teaching hospital of Punjab

Introduction: The study based on the recognition of the relationship between the organizational culture and burnout symptoms among the medical faculty.

Burnout is chiefly illustrated by depersonalization emotional exhaustion and reduced feelings of personal execution. The causes of work stress are intimidation, feeling of insecurity, disappointment, frustration, increased pressure and, bitterness, etc. which leads to burnout syndrome(“Are You Experiencing Burnout?,” 2017).

It is the reaction of employee continual interpersonal pressure of work which is distinct by three factor: ineffectiveness, exhaustion and, cynicism (Portoghese, Galletta, Coppola, Finco, & Campagna, 2014)

Methodology: Study Settings
The study will be conducted at the Shahida Islam Medical and Dental College Lodhran.

Study Design
It will be an observational cross sectional study. The study will be conducted on the basis of quantitative methods.

Study Type
The study would be a co-relational study.

Sampling Technique
Nonprobability convenient sampling technique will be used. All those faculty members who are meeting the inclusion exclusion criteria will be asked to participate in the study after giving an informed consent.

Results: none

Conclusion: none
Introduction: The world is a global village; globalization has taken roots over the years with connections between different countries and different nationalities. Media, Social media and embassies are the key elements that influence globalization. The entire world and its 8 billion inhabitants are identified by geographical, cultural, social and religious factors. These factors may make them distinct from each other, but they still have much in common. Healthcare is a very stressful environment and wearing comfortable and confident clothing can help make a difference in the way doctors interact with patients and fellow colleagues. Doctors across different cultures are required to wear different set of attires. These standards of global medical attire blend in with local standards to be acceptable for the people of the region. In the UK, the department of health published a “bare below the elbow” document which was aimed at developing a local uniform and dress code policy (Team, 2010). According to the paper the first thing that their patient saw in their doctors was their attire which helps build a good doctor-patient relationship (Gherardi et al., 2009). Patient care and satisfaction is the core of the medical practice and from the first encounter physicians work to build a rapport providing patient centered care, defined as: “respectful of, and responsive to, individual patient preferences, needs and values” (The, 2001). Apart from personal style clothing of a doctor is symbolic of their specialty and culture. However, in a survey done in 2015 it was revealed that only two out of thirty medical students actually thought about what they wear to the hospitals. (Chopra & Saint, 2015). An online based survey on the medical news website MedPage Today created in 2015 had a response rate of approximately 2300 patients and doctors, with the majority (62%) favoring white coat over formals or scrubs.

In an article published in 2018 doctors from different hospitals in Europe expressed their opinions about what doctors are supposed to wear. Some favored shirts and trousers whereas some favored skirts with heels. (Rimmer, 2018)

Methodology: Data will be collected from outdoor patients and doctors of sheikh zayed hospital, that meet the inclusion criteria. Informed consent will be taken before enrolling them in the data collection procedure. Demographic data will be noted, and patients will be asked to fill a questionnaire.

The questionnaire consists of 11 questions which were divided into two sections. In the first section, the subjects were asked to answer 5 close ended questions on a 5-point likert scale. These questions were about the importance of doctor’s attire on patient care and satisfaction. In the second section of the questionnaire 6 close ended questions were asked in which the subjects would respond to a picture of doctor dressed in different attires. The duration of study will be 6 months.

Results: Study not completed yet.

Conclusion: With culture playing a huge role in how doctors dress when coming to their workplace no study has explored this aspect in the Asian culture.

The results of the study could help the doctor community understand how patients perceive them in different attires and how it affects their level of confidence in them. This could further help upgrade the overall healthcare system and hence provide better patient care.
Title: Prevalence of Questionable Research Practices (QRPs) among different professions and across different countries - A literature review

Introduction: QRPs are more damaging to science and its public reputation than obvious fraud. The definition of QRPs and thus the abstraction of the concept differs in different countries and professions. This literature review attempts to find out the prevalence of QRPs among different professions and in different countries and whether there is a difference in prevalence.

Methodology: ERIC, PubMed, PakMediNet and Google were searched using different search strings. A total of 72 articles were identified out of which 8 were included in the study according to the exclusion inclusion criteria set.

Results: Most of the studies have been conducted in the West, a very few in Asia and none in Pakistan. Majority of the studies have been done in the field of Psychology. The main reason for getting involved in QRPs is the increased pressure to publish in top journals.

Conclusion: QRPs do not have a universal definition. The type of QRPs most prevalent are different in different countries and across different professions. No work has been done on QRPs in Pakistan, in any field. Finding out the prevalence of QRPs in Pakistan, among clinical and biomedical researches will help save scientific integrity and its public reputation.

Title: Exploring the factors affecting quality of postgraduate medical education in Pakistan: resident perspective

Introduction: The quality of the training and experiences in the learning environment relates to the quality of patient care. The environmental factors identified should be addressed to improve the areas of weaknesses in the program(Idon, Suleiman, Olasoji, Mustapha, & Abba, 2017).

Professional self-concept in medical students has great impact on post-graduate medical education in clinical training. Its formation depends on curriculum and environment. The important factor in satisfaction of students in clinical clerkship is self-identity as a specialist(Yu et al., 2019).

Postgraduate medical education necessitates a various gamut of learning in the context of providing health care
to patients. The learning and educational process during residency is highly self-motivated and involves a complex relationship among a variety of factors.

Little research evaluated the quality of postgraduate medical education in Pakistan. The structured training framework is not communicated to residents. most residents were not satisfied with the structured training for theoretical knowledge provided. This finding is prevailing in underdeveloped countries like Japan, Turkey, Saudi Arabia, and Pakistan.

This negative image among postgraduate students is a source of concern for the public health system, which is not oblivious to the fact that individuals who are satisfied with their professional activity are more effective and deliver higher quality care.(Biedma-Velázquez, Serrano-Del-Rosal, García-De-Diego, & Cerrillo-Vidal, 2012)

The communication with patient judged with feedback. It revealed there is low score with presence of training residents in clinics. Although the surgical specialty had little or no impact of presence of trainee on satisfaction of patient with communication(Li et al., 2018).

The surgical training is difficult task for a program. The quality evaluation of education in postgraduate surgical trainees is best done with feedback and satisfaction of the trainees. The next step is improvement in the education strategies and effectiveness. The general surgery resident's opinion is about improving quality of ward round and practical work(A Hamour, 2016).

The literature searched about the training of teachers should be used for better learning environment for postgraduate training doctors in hospital. The development of teachers is identified in the form of themes like giving constructive feedback and educational climate, assessment of training and trainee's need(Wall & McAleer, 2000).

The educational environment in postgraduate students must be conducive for learning and promoting literature search.

The cost of the educational environment for the quality of education is underpropped by research work and publications, showing that students’ perceptions of the educational environment quality stimulate their involvement, satisfaction and success (Schönrock-Adema, Bouwkamp-Timmer, van Hell, & Cohen-Schotanus, 2012).

In developing countries like Pakistan, the educational facilities for postgraduate residents is rated poor in duty hours and work load. The income and accommodation are perceived as unattractive. The study was done at single teaching hospital that why is more research is needed in future to get the perception of residents to improve quality of medical education in postgraduation (Saaiq, 2013)

Methodology: The validated questionnaire is used to collect the data. The questions include socio-demographic data and residents’ views on the curriculum, learning resources, trainers, training methods, and assessment tools. The analysis of data done and results will be formulated.

INSTRUMENTATION:  A validated Questionnaire

Pilot Testing: I will pilot the questionnaire in our setting to make it according to our context.

DATA COLLECTION PROCEDURE: The questionnaire is already validated and internal consistency measure using Cronbach Alpha coefficient. The SPSS version 22.0 was used for quantitative data analysis. Descriptive statistics were used to calculate frequencies, means, and SD.

9. DATA ANALYSIS PROCEDURE: Detailed description of type of analysis plan according to type of variables and
study design, statistical tests (if required), stratification of confounders/effect modifiers, presentation of results etc. must be clearly mentioned. In case of qualitative analysis, type and detail of analysis should be given.

I will conduct a cross-sectional study during Aug 2019–October 2019 (n=200) using an anonymous, self-administered questionnaire. The questions included socio-demographic data and residents’ views on the curriculum, learning resources, trainers, training methods, and assessment tools. The questionnaire ill administered to 35 residents from residency programs to assess the clarity of the questions. The questions will be then rephrased accordingly. Quantitative data will be analyzed in the form of frequencies, mean and standard deviation. Cronbach alpha for internal consistency of the questionnaire and t-test is used for comparison of means.

Results: results of literature review is the basis for rationale for research proposal for exploring factors affecting postgraduate medical education and perception of residents,

Conclusion: Research is essential component of postgraduate training and it assures quality improvement. The supporting evidence for this is changes in medical knowledge and practice; increasing patient, consumer, and employer expectations of physicians, advances in technology in education and healthcare; changing expectations from specialist trainees and supervisors, and societal demands for greater accountability from the medical profession(Sandhu, 2018).

All the factors identified in literate for enhancing postgraduate training are also perceived important in developing countries. However, the evidence in the form of research articles is lacking from developing countries. Our research paper will add to explore factors and solution to improve postgraduate medical education.

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Theme: Faculty Development
Name: Ishtiaq Ali Khan
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Title: Students’ perspective of bedside teaching: A qualitative study

Introduction: BST (Bedside teaching) has always been seen as a primary teaching modality in which most aspects of clinical practice can be demonstrated and trained. It remains compatible with more recently defined learning theories such as, contextual learning but its use is unfortunately in steady decline due to multiple responsibilities of faculty members.

Methodology: The study design was qualitative inductive thematic analysis using transcripts from audio-recorded focus group discussions. Four focused group discussions with medical students of 4th and 5th year MBBS were conducted. Each 40 to 50 minutes discussion session was audio taped and transcribed verbatim. Thematic analysis extracted key themes pertaining to the objectives of the study

Results: A total 75 students took part in the study. They described many barriers in its effective implementation: uncooperative and a smaller number of patients and faculty attitude. Our students suggested promotion of awareness among the general public about students’ learning and its benefits, free medical treatment for expatriates and faculty development program to promote bedside teaching.

Conclusion: Bedside teaching is an important learning tool. Free of cost or economical medical treatment for expatriates may also increase the number of patients available in hospital for BST. Faculty development programs will play pivotal role to prove BST as an effective learning tool.
Title: Continuing professional development: Preferences and barriers among dental practitioners

Introduction: In this era of technology and advancement, each and every profession is becoming invincible, likely, the field of dentistry is also evolving at a rapid pace making it challenging. Everyday emerges with new dares wanting the need for a dentist to get updated making them competent enough to survive. In Pakistan, studies on dental practitioner's attendance in formal Continuous Professional Development (CPD) courses is very meager, furthermore, studies on practitioners' preferences for the methods of CPD activities are scanty.

Aim of this study was to assess the frequency of attending the CPD courses by dental practitioners working in hospitals and private setup, preferences of topics with preferred methods and the barriers.

Methodology: A cross-sectional survey of dental practitioners registered with Pakistan medical and dental council was done using a self-administered questionnaire. The group of dental practitioners included in the study were 253 in number practicing in different regions of Punjab.

Results: The mean age of the participants was 27.4 years. Most of them (35.3%) said that they attend CPD course once in 6 months and (32.65%) of them rarely attended CPD course. Esthetic dentistry is the most preferred topic of interest. Majority of dentists said Hands-on on live patients as the most preferred method of CPD. Lack of time, cost of the courses and low quality of the courses are some of the most important perceived barriers.

Conclusion: Continuous professional development courses are attended once in 6 months by only some of the dentists while other takes once a year or rarely attend the CPD course. Most of them preferred esthetic dentistry and hands-on on live patients as their interest while lack of time and cost was the most important barrier.

Title: Workshop on construction of case cluster MCQs what, why and how: Reaction of faculty

Introduction: Integrated curriculum is applied to most of the medical colleges, but the assessment is still disintegrated. There is a great need to develop faculty on construction of complex assessment items like Case Cluster MCQs, which are considered best for assessing PBLs. To align assessment strategies with teaching strategies, a workshop was arranged to develop faculty on a new skill, how to construct case cluster MCQs. Main focus of the workshop was to assess the reaction of faculty in terms of satisfaction at the end of the workshop.

Methods: A quantitative program evaluation study was carried out on 75 faculty members of basic and preclinical sciences of a medical college, including demonstrators, post graduate trainees, assistant professor, associate professor and professor. 4-hour workshop was conducted three times, counting 25 participants each time. After the workshop, participant’s “reaction” was measured through self-reported “post workshop satisfaction questionnaire” on 5-point Likert scale. Along with descriptive statistics and percentages, Pearson Correlation Coefficient was used to analyze the data.
Results: Satisfaction of participants after the workshop (n=75) was 93.3 % on a 5-point Likert scale (p=0.00). Range of responses of all the 10 variables fell between 3.93 and 4.61. 55.8 % (p= 0.00) of participants strongly agree and 38.1% (p=0.00) agree on parameters of workshop. Among all the participants 35.7 % agree and 64.3 % strongly agree that workshop enhanced their learning about case luster MCQs. Not a single participant disagrees. This shows a positive attitude of participants towards the workshop.

Conclusion: It is remarkable that a positive change in the attitude of faculty members in terms of the importance of 'CC MCQs for assessing PBLs' took place as a result of a single day workshop. Aiming case cluster MCQs as part of assessment can help students to learn better and improve their clinical reasoning.

Theme: Faculty Development
Name: Samina Malik
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Title: Impact of intelligence quotient (I.Q) vs emotional quotient (E.Q) of basic-sciences faculty on feedback by medical undergraduates: An institutional study

Introduction: Human-resource providers are now stressing on the importance of I.Q and E.Q tests while inducting individuals. There is a paucity of research-evidence in the field of medical education in this regard.

Methodology: To test which parameters among I.Q and E.Q of basic-sciences faculty is significantly appreciated by medical undergraduates.

A total of 20 lecturers who belonged to various basic-science departments of Avicenna Medical College were included in the study after informed consent. All of them were tested for I.Q score by S.I.T questionnaire and for E.Q by online quiz devised by the Institute for health and human potential. Their questionnaire-based feedback was obtained from medical undergraduates taught by them.

Statistics: Qualitative questionnaires were measured on Likert-scale. Means of the 3 parameters in each subject were compared by ANOVA.

Results: Positive feedback was highly significant in lecturers with above average I.Q as well as E.Q, whereas it was significant in lecturers with E.Q better than I.Q but was insignificant and / or negative in lecturers with below-average I.Q and E.Q.

Conclusion: Lecturers with above-average I.Q & E.Q are more appreciated by medical undergraduates and E.Q is relatively a more valued parameter.

Benefit & Future Prospect: To improve the standard of medical education, H.R. department at medical colleges may incorporate I.Q and E.Q tests in their selection-criteria at the time of employing faculty and E.Q should be given more rating over I.Q. Positive & negative feedback forms can be introduced to facilitate teaching and learning and will contribute to faculty development. It is strongly recommended that a process of faculty evaluation through feedback is incorporated in order to improve teaching and learning practices.
**Theme: Faculty Development**

**Name:** Ishtiaq Ali Khan  
**Email:** drishtiaq71@yahoo.com

**Title:** Including bedside teaching in faculty development programs

Introduction: Bedside Teaching has always been seen as a primary teaching modality in which most aspects of clinical practice can be demonstrated and trained. It remains compatible with more recently defined learning theories such as, contextual learning, where the learning of knowledge is dependent on the context in which it is learned.

Methodology: The study design was qualitative inductive thematic analysis using transcripts from audio-recorded focus group discussions. Four focused group discussions with medical students of 4th and 5th year MBBS were conducted. Each 40 to 50 minutes discussion session was audio taped and transcribed verbatim. Thematic analysis extracted key themes pertaining to the objectives of the study.

Results: A total 75 MBBS students participated Student described many barriers in effective implementation of bedside teaching: uncooperative and less number of patients and faculty attitude. Our students suggested promotion of awareness among the general public about students' learning and its benefits, free medical treatment for expatriates and faculty development program will improve bedside teaching.

Conclusion: Bedside teaching is an important learning tool. Its utility can be enhanced by orienting local patients' attitude towards the importance of students' learning, by providing free medical treatment to expatriates and by including bedside teaching in faculty development programs.

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**Theme: Faculty Development**

**Name:** Shafaq Sultana  
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**Title:** Effect of faculty training on quality of MCQs

Introduction: Evidence based guidelines for the development of One-Best multiple-choice questions are well documented in the literature. However, a wide variety of evidence suggest that the One-Best MCQs used for the assessment of medical students are heavily flawed due to lack of faculty training in item writing, which eventually affects the student performance and reliability of the exam. Therefore, it is recommended that faculty should be trained in item writing along with provision of resources and feedback by the Medical educationist. The Objectives of this study are to Compare the scores obtained from quality of One-Best MCQs checklist before and after the faculty training workshop and Identify the common flaws in One-Best MCQs in the pre and post training set of samples.

Methodology: This Quasi-experimental single group study design was conducted at private Medical and Dental College based in Karachi, Pakistan.

In this study, a faculty development workshop was conducted as an intervention on One-Best MCQ writing as per the guidelines provided by the National Board of Medical Examiners (NBME). The workshop participants were 10 full-time faculty members. Total 65 One-Best MCQs were prepared both pre and post workshop based on a list of predetermined objectives. A checklist was developed to identify the item writing flaws, as per NBME Guidelines. Both sets of One-Best MCQs (pre and post) were reviewed by one Content Expert and 2 Medical Educationist together. The data was entered in SPSS version 23 and analyzed using Wilcoxon test.

Results: The results showed that faculty training on One-Best MCQ writing lead to improvement in the quality of
One-Best MCQ. There was a significant decrease in mean score of flaws in One-Best MCQS from pre-test to post-test \( (p < 0.01) \). The most common flaws were found in the stem and lead-in of One-Best MCQs.

Conclusion: The result of this study emphasizes the importance of faculty development workshops on Item writing. The positive outcome of the study proves that there is constant need to internalize the importance of faculty development program in order to conduct valid and reliable assessment in the institutes. Moreover, it provides evidence that faculty training help in improvement of quality of test item therefore it is recommended to conduct such type of exercises regularly not only in One-Best MCQs but also for other assessment tools for example SAQs and OSCEs.

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**Theme: Career Development**

Name: Ahmad Hassan Khan

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**Title: Role modeling: Influences on professional behaviors and career choices**

Introduction: There is a significant role of role models in determining how medical trainees mature professionally. One of the major competencies required to be an effective physician in the 21st century is the transformation of medical students at the medical schools into ethical and professional physicians. Role modeling was traditionally one of the key methods to transmit this skill and still is in certain aspects. The objective of the study is to explore the factors which influenced the medical teacher's professional behavior and career choice path due to both positive and negative role modeling of teachers, during their journey of becoming a doctor.

Methodology: A qualitative study was conducted on medical teachers from both basic and clinical sciences of three medical colleges of province Punjab in Pakistan. Eighteen face-to face semi structured interviews were included in the study. Transcribed interviews were organized in Atlas Ti software for data analysis.

Results: Effective teaching, clinically competent doctor and good personal qualities were the attributes of positive role models emerged as subthemes which influenced the students whereas negative role models' attributes were, being an incompetent doctor, ineffective in teaching and bad personal qualities. One hundred and sixty-one codes were generated out of the eighteen interview transcripts. Two major themes emerged; positive role models and its influences, negative role models and its influences. Conscious and unconscious imitation of the negative role models was narrated by the interviewees.

Conclusion: This study highlights that students acquire many attributes of their role models both consciously and unconsciously, which signifies the importance of its positive and negative effects. A correlation does exist between positive and negative role models and student's career choices. It is suggested that both teachers and administrators should understand the significance of role modeling and promote excellence in role modeling. Awareness about the competencies of role modeling should be part of faculty development programs besides teaching reflective practices to the role models themselves.
Title: Is “Gol Roti” the ultimate goal of female doctors

Introduction: Pakistan is a proud country with its rich cultural values. A perfect woman is considered the one who is a good subordinate and most skillful in the kitchen, making round chapatis is the highlight of those skills. Although as a nation, stereotypical norms have shifted and females are encouraged to get medical education and become doctors, their academic contribution and representation in higher academic rank seems scarce.

Methodology: In this study, we investigate gender differences in academic ranks and research in renowned Medical Institutions of Pakistan. Websites of three institutions were used to identify male and female faculty members, their respective publications were counted using “Pakmedinet.com” and “Scholar.google.com”

Results: A one-way ANOVA showed significant difference in the male female ratio at higher academic ranks. This ratio drastically increases at Full Professor level where males are three times more than female Professors. ANOVA results also show that publications by male faculty members is significantly higher than females. Even on the same rank, women have not published their work in the same capacity as men.

Conclusion: The results are in alignment with several previous studies that indicate gender disparities between males and females especially as they climb up the academic ladder. Publications are a measure of academic productivity. This study suggests that although female representation as faculty members have increased over the years, their lack of frequent publications might be a factor that hinders women in advancing in academic ranks. Continued studies are required to explore more reasons for this gender inequality and highlight methods to address the imbalance.

Title: Balancing profession, family and cultural norms by women dentists in Pakistan

Introduction: ‘Feminization of dentistry’ is here in Pakistan where an average BDS class boasts of 70-80% female students. On graduation, many women dentists do not pursue their careers, resulting in a void of practicing dentists in the country. This phenomenological designed qualitative study aimed to investigate the reasons behind this dynamic.

Methodology: Two FGDs and 14 interviews from a diverse sample of 20 purposively selected women dentists from 5 cities yielded data to achieve saturation. Interactions were audio recorded with consent, transcribed verbatim, transcripts analyzed and coded into themes and sub-themes. Respondent validation and investigator triangulation ensured validity and credibility of findings.

Results: The core theme is that a support system is essential to facilitate a woman dentist to pursue her career, a prerequisite driven primarily by 'economic need'. Economic need then circuitously manipulates three peripheral themes of traditional gender roles, social capital of doctor brides and life stage priorities mainly motherhood.

Conclusion: The typical dental graduate in Pakistan is female from a socio-economically privileged class. Since ‘economic need’ is the dominant determinant of pursuance of career, many opt for the luxury of choosing not to work. Admission policies and retentive protocols linked to renewal of license to practice should be revised.
Theme: Miscellaneous
Name: Rafia Minhas
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Title: Assessing the perceptions of faculty and students about entrepreneurship education to medical undergraduates

Introduction: Entrepreneurship is the competency and the inclination to initiate, manage and successfully flourish a business venture. The clinical entrepreneurship is a new solution to an old problem; fewer job opportunities, need for innovation and lateral thinking, and the demand for leadership roles in our graduating medical undergraduates.

Methodology: A qualitative study.

Results: The results of this qualitative exploratory study will be available till the end of Nov.

Conclusion: The perceptions of faculty and students will be concluded about entrepreneurship education.

Theme: Career Development
Name: Fadia Asghar
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Title: Grasp the roots: Reasons to the lack of motivation among dental practitioners towards Continuing Professional Development (CPD)

Introduction: There are several factors contributing to CPD out of which motivation plays an important role because CPD requires higher level of self-directedness. Thus considering that motivation carries great importance in CPD, I wanted to explore the reasons and the motivational factors in dental doctors in Pakistan which prevent them from undertaking CPD programs.

Methodology: I used the keywords from my research question to search for the articles on internet. Following electronic databases were used to search for the related articles:

1. Google Scholar
2. Pub med
3. Eric
4. Pakmedinet

While screening through the articles, a handful of research articles were sorted out and studied in detail.

Results: Advantages of CPD has been mentioned as to enhance the teaching practices well as to develop academic role that could lead to an improved reputation. Many parts of the world are making the practice of CPD either mandatory or voluntary structure programs but in developing countries including Pakistan this issue is still unresolved.

Conclusion: Most of the countries have made minimum CPD hour’s requirement mandatory for the renewal of the dental license. But in Pakistan sporadic CPD activities are taking place that is usually unattended. Many parts of the world are making the practice of CPD either mandatory or voluntary structure programs but in developing countries including Pakistan this issue is still unresolved. The major challenge as per documented by WHO is the lack of motivation, incentives, legal bindings and the absence of the need based accredited programs.
**Theme: Miscellaneous**

**Name:** Komal Atta  
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**Title:** Burning out and fading away...

Introduction: Empathy in medical and health sciences students is a key component for progression in their fields as they are constantly handling patients at a very close level. The aim of this study is to explore how non-curricular factors such as the hidden curriculum and student burnout effect student empathy.

Methodology: Validated measures of both empathy and burnout were distributed in three different institutes in three different cities to Pakistan. Study cohort included students of medical and allied health sciences at the three campuses, 2000 questionnaires were distributed of which complete data of 1100 (55%) were retrieved. In the second part of the study 2 focus groups were formed of 10-15 students each per campus for qualitative analysis of themes relating to the hidden curriculum and empathy.

Results: A negative correlation was established between empathy and burnout and the hidden curriculum proved to be a significant shaper of student reactions in clinical setups. Themes that emerged in correlation to empathy were “negative/positive role modelling”, “unstructured healthcare setup”, “sociopolitical scenario” and “communication skills and language” issues.

Conclusion: Our study shows that both burnout and hidden curriculum are key players in determining empathy in students of health science departments. Students are affected not just by teachers and staff members but by overall national/international issues, policy reforms in health care and the sociodemographic setups of their area.

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**Theme: Miscellaneous**

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**Title:** Personality factors and admission to medicine: A review of literature

Introduction: It has been accepted widely that personality influences almost all aspects of human life. The influence of personal attributes on the learning of medical students and competence of doctors has been acknowledged in the published literature. Concerning medical scholars, research has observed the role of personality and educational achievement in pre-clinical years as well as clinical expertise in clerkships and post-graduate period.

This literature search was performed to determine the evidence that, if personality of medical student is a valuable prognosticator of educational accomplishment and clinical competence and may or may not be considered at the time of selection to medical field.

Methodology: A review of literature from 2009 to 2019 was performed using the data bases PUBMED, GOOGLE SCHOLAR, ERIC, SCIENCE DIRECT and PAK MEDINET. The words and phrases searched were personality assessment, medical colleges, admission policy, views and stakeholders. The inclusion criteria demanded that studies should be longitudinal studies executed at least over a period of 2 years and calculated outcomes on authentic and standardized tests for personality, systematic reviews, narrative and thematic reviews and full text articles written in English.
Results: The author identified twenty relevant studies. Ten of the studies observed the effect of non-cognitive factors on academic performance and clinical competence, four studies focused the different methods of assessing personality at the time of selection, three studies explained the myths and different aspects of personal attributes, two studies aimed at identifying the most important personality traits to be considered for selection to medical schools and one study attempted to identify cognitive and non-cognitive differences between selected and non-selected students.

Conclusion: There is conflict of opinion among researchers to include assessment of personality attributes in medical schools' admission criteria. The personality factor conscientiousness has been appeared as a noteworthy prognosticator of academic success in medical education. The connection between personality and accomplishment turns more conspicuous as students’ progress from pre-clinical to clinical years. A number of published studies stress the significance of extended and diverse plan to choose medical school applicants assessing both cognitive and non-cognitive components.

Theme: Miscellaneous
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Title: A narrative review of the unprofessional behaviors of physicians as perceived by patients

Introduction: The complaints relating to medical professional behaviors are usually related to doctor practice management, doctor's manner, medical reports/records, inappropriate behavior & advertising. The broad range of disrespectful conduct is classified as disruptive behavior, insulting /demanding behavior, inconsideration of treatment of patients & planned disrespect of patients. These can be in the form of verbal or non-verbal acts, abuse of power and unwelcoming behavior.

Methodology: A Narrative review was done, and data bases explored was PubMed, Google scholar, PsycINFO, science direct, ERIC & pakmedinet. Literature search was done regarding unprofessional behaviors at workplace and by doctors by using different keywords. Selected studies related to professional ethics, unprofessional workplace behaviors by doctors, professionalism and patient experiences during their treatment were identified.

Results: Various items reported as Unprofessional behaviors were identified and are classified in six themes, dishonest behaviors, Behaviors related substandard practice, unacceptable ethical behaviors, disrespectful behaviors, dishonest behaviors, & behaviors related to Doctor Manners. These behaviors were found to be associated with lack of professionalism.

Conclusion: Limited literature is available about the perceptions of unethical behaviors by patients from doctors. There is a need to create an environment for change and to address disrespectful behavior occurring consistently and fairly. Code of conduct should be placed at central position to fulfill the expectations of the patients.
Theme: Miscellaneous

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Title: Influence of negative role modeling on medical students’ professional development

Introduction: Role modelling is regarded as the primary source of learning humanistic and ethical aspects of healthcare. Starting at the undergraduate level, medical students are given different learning opportunities and are in contact with a variety of potential role models, some of whom are inclined towards negative more than positive, professional behaviors (Hendelman & Byszewski, 2014).

PROBLEM: As unprofessional behavior in early educational periods can last for entire medical careers, there is immediate need to investigate and understand this issue, considering the severity of its outcomes, even if it occurs rarely (Chang, Lee, Lee, & Kwon, 2016)

GAP: Although studies on the common characteristics of positive role models are abundant in other parts of world, research specifically on negative role modeling remains limited and ways to reduce its negative effects (Bahmanbijari, Zare, Haghdoot, & Bazrafshan, 2016)

HOOK: Students’ point of view about unprofessional behavior could reflect the way in which students internalize their concepts of (un)professional behavior and its contribution to identity formation (Tagawa, 2016).

Objectives: The objectives of this literature review are

1. To explain the strategy of literature search regarding influences of negative role modeling on medical students’ professional development.

2. To explore the causes of unprofessional behaviors in medical students.

3. To explore the process through which medical students are affected by negative role modeling

Methodology: The process of review of literature involved two steps: Development of search query and undertaking literature search from selected databases. A systematic review was conducted searching Medline/PubMed, ERIC and google scholar. Keywords and phrases were used to search the relevant articles from 2009 till date focusing on influences of unprofessional behaviors of teachers on medical students’ professional development.

Results: PRISMA flowchart was used and the search yielded 83 studies after removal of duplicates, and 8 met all inclusion criteria. Critical appraisal of reviewed articles resulted in four major themes; Professional development of medical students, Role modeling as an educational strategy, Reasons of acquiring negative traits of role models and Effects of negative role modeling on medical students.

Conclusion: This overview provides an insight on the work done on attributes of both positive and negative role models as well as their influences on professional development of undergraduate medical students. Causes of acquiring negative traits of teachers were found to be strong hierarchical system in training hospitals, inadequate professionalism education and individual attributes of medical students. Negative role modeling drastically effects the learning gains and students’ choice of specialty for future training so this evidence can be applied as a cost-effective method to amend the specialties issues with deficient staff by improving their experiences of positive role models.
Title: Emotional development: The invisible ladder to dynamic leadership

Introduction: Emotional Quotient (EQ) is a measure of a person's level of Emotional Intelligence (EI) which refers to a person's ability to perceive, control, evaluate, and express emotions. Emotional intelligence is one of the best proven predictors of success in leadership which makes it critical to assess it in medical undergraduates as who expected to develop these leadership qualities as they advance from preclinical to clinical years.

We aimed to measure and compare the EQ score and the leadership (LS) score of preclinical and clinical students and to find any correlation between the EQ score and the LS score within each class.

Methodology: Current cross-sectional study was designed for comparison of 12 leadership traits among 83 preclinical (1st year) and clinical (4th year) medical undergraduates at CMH Lahore Medical and Dental College on 5-point Likert scale. Their EQ was measured quantitatively as well as qualitatively by using free online test by INSPIR3 based on 10 multiple-choice questions. Qualitative questionnaires were measured on Likert scale and compared the EQ and the LS score between the two classes.

Results: Median Leadership score was generally higher in first year whereas median EQ score was equal in both classes but there was no statistically significant difference in average Leadership and average EQ score between both classes. A significantly positive correlation was observed between the Leadership and the EQ scores within each class.

Conclusion: The results indicate that there is no improvement in EQ while advancing from preclinical to clinical years owing to stress on mainly IQ assessments and lack of awareness about the significance of EQ. The deterioration of Leadership scale highlights lack of EQ development skills. The positive correlation between Leadership scale and EQ scores reinforces that students with higher EQ are better leaders and thus reiterates the need to incorporate EQ development programs in the medical training curriculum.

Title: Self-perception of students Vs self-perception of faculty regarding professionalism at a private medical institute of Lahore

Introduction: Professionalism, a blend of ethical, social and cultural values, heads its way up to becoming one of the mandatory competencies exhibited by today's healthcare professionals. There’s no second thought that it should be taught and assessed formally in all the medical schools worldwide.

Methodology: This was a cross sectional study. A questionnaire with informed consent was given to dental faculty and dental students of Final year BDS after taking permission from Institutional Review Board. A pre validated Penn State College of Medicine Professionalism Questionnaire (PSCOM) developed by Blackall et al. to measure professionalism (Gf et al., 2007) was used and the results were compared.
Results: In my study the response rate from students was less as compared to faculty. This is due to their lack of interest in filling the questionnaire which can be attributed to ignorance to the importance of self-assessment in professionalism and its implications.

Conclusion: Professionalism curriculum is effective to some extent, yet the awareness to the importance of self-assessment on professionalism is lacking, which needs to be addressed.

Theme: Students
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Title: Correlation between emotional intelligence and academic stress in undergraduate medical students

Introduction: Students face health related issues and stress due to burden of their studies. Emotions can affect one's reactions, therefore Emotional Intelligence may help overcome the negative effects of stressful situations faced by the students.

Methodology: Design: Cross-sectional Correlational study.

Setting: The study was conducted among the undergraduate student of M Islam Medical College Gujranwala. Two hundred and ten students participated in the study.

Methods: Schutte Emotional Intelligence and perceived stress scale proformas were given to participants and their EI and stress level was measured.

Results: 55.2% of participants were females and 44.8% were males. Perceived stress score was higher in female and second year students. No significant difference was observed in emotional intelligence score between both genders and study of year. There was a significant correlation between EI scores and educational stress (p < 0.001).

Conclusion: It is obvious from our study that the emotional intelligence scores and educational stress are negatively correlated. Educating students to improve EI may help prevent stress and optimize their overall wellness. Hence it is suggested that emotional intelligence awareness workshops and training be included in the educational programs.

Theme: Professionalism
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Student’s perceptions of Medical professionalism in the age of online social networking

Introduction: Rapid, grass root adoption of social media in medicine has led to concerns regarding professionalism lapses. The objectives of the study were to assess Medical students’ views of e-professionalism linked to online presence, professional boundaries, and appropriateness of posted content related to social networking sites. Study also assessed pattern & purpose of current social media use by medical students.

Methodology: Following Institutional Review Board approval & informed consent, data was collected from participants in a public sector Medical University in Lahore. An anonymous, self- administered questionnaire based on previous
literature was used for data collection. Questionnaire covered Demographic information; Social networking usage pattern; online privacy & profile; Professional Boundaries; and appropriateness of posted content related to social networking sites. Data was analyzed by SPSS 20.0.

Results: One thousand and eighty-seven medical students in our sample (99%) among 1100 respondents were using social media, mostly "WhatsApp" and "Facebook". The 510 (46%) medical students reported they never monitor their online presence at any social media site. More than 3/4th of medical students had their personal information available on Social Networking Sites (SNSs). 530 (48.2%) medical students agreed to accept friend request from faculty and 470 (42.8%) medical students invited faculty as friend. Students overall exhibited good understanding of posts related to violation of patients' privacy, description of patient encounter in negative tone, derogatory remarks about ones' institution, faculty, classmates and medical profession etc., as being unprofessional and inappropriate. Furthermore, while accepting or sending a request to a current patient was largely considered inappropriate, sending or accepting friend request by current teachers was not considered inappropriate by majority of respondents. Only 158(14%) medical students reported any discussion in the class about the online medical professionalism. 214(19.5%) were aware of any international or national guidelines related to student’s use of social media.

Conclusion: Students were less concerned about privacy on SNSs. with significant majority having personal information available online. Concerns regarding breaches of professionalism were not unfounded, as almost half of medical students in our study observed, what they considered as unprofessional posts by medical students online. Better understanding of student’s pattern of social media use as well as their perspectives of unprofessional content and how they feel medical schools should improve awareness of these issues could help inform policy development efforts, professionalism curriculum as well as approaches to teach medical e-professionalism.

KEY WORDS: social media; Social networking; Medical education; Medical students; Professionalism; e-Professionalism.

Introduction: Changes in hematological parameters during laparoscopic surgeries like neutrophils, leukocytes, neutrophil lymphocyte ratio, platelet lymphocyte ratio and mean platelet volume have been observed. The objectives of this research were to assess changes in hematological parameters after laparoscopic cholecystectomy and their relationship with pressure of pneumoperitoneum and duration of surgery.

Methodology: This cross-sectional study was conducted in the Departments of Surgery of Allied Hospitals of Rawalpindi Medical University for a period of 1 year. Patients undergoing Laparoscopic Cholecystectomy by standard procedure were included while patients with any co morbidities like Hepatitis, Diabetes and those cases where Laparoscopic Cholecystectomy was converted to Open Cholecystectomy were excluded. Blood samples, drawn within 12 hours of procedure, were used to determine the baseline serum ALT, ALP, Leukocyte, Lymphocyte, neutrophils, neutrophil to lymphocyte ratio, MPV, Platelet to lymphocyte ratio of the patients with confirmed diagnosis of cholelithiasis. Preoperative and postoperative values of these parameters were taken. Other variables like age, gender, BMI, indication for surgery, duration of surgery, pressure of pneumoperitoneum and duration of hospital stay were also noted. Paired samples "t" test was applied to compare the mean preoperative and postoperative values of hematological parameters.
Results: It was observed that Hb, MCHC, Lymphocytes, Platelets, MPV and ALP decreased post operatively. However, MCV, MCH, Leucocytes, Neutrophils and ALT increased postoperatively. The difference in mean MCV, Leukocytes, Neutrophils, Lymphocytes, ALT was statistically significant with p values of 0.035, 0.001, 0.000, 0.000 and 0.05 respectively. Change in hematological parameters was not affected by pressure of pneumoperitoneum (p>0.05) except for ALT levels (p=0.026)

Change in Leukocytes and Platelets was more marked when duration of surgery exceeded 45 mins (p<0.05)

Conclusion: Hb, MCHC, Lymphocytes, Platelets, MPV and ALP decreased post operatively. However, MCV, MCH, Leucocytes, Neutrophils and ALT increased postoperatively.

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Theme: Professionalism
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Title: Impact of multisource feedback on behaviors of young doctors

Objectives: Research Question: What is the impact of MSF on the behaviors of house officers? What factors affect the receptiveness of MSF among house officers?

Introduction: Multisource feedback (MSF) is a tool to assess the skills and attitude of professionals. (Meenakshi, 2012) The application of multisource feedback in assessment of doctors in a healthcare setting involving doctors, other doctor colleges, staff nurses, and patients is reliable, valid, and feasible (Donnon, Al Ansari, Al Alawi, & Violato, 2014) MSF is being used as a tool for assessment of professional development of health professionals in all over the world (Crossley, 2015) (Alofs et al., 2015)

For patients safety it is a necessity of the current time to monitor the ongoing competency of doctors. (Muhammad Gadi, 2010) Feedback is an important component of MSF which allows the health care professionals to reflect their performance and improvement. (Murton, 2016) The basic catalyst for change is negative or discrepant feedback received from other colleagues (Ferguson, Wakeling, & Bowie, 2014) However despite positive change to the MSF negative responses may also occur as a result of negative feedback. (B. A. Yama & Schwartz, 2015)

Problem: There are many barriers to acceptance of physicians to multi-source feedback (MSF), including: perception of expertise, misunderstood responsibilities and other self-made roles, hospital culture interprofessional jealousy, and power dynamics (Brie A. Yama, Hodgins, Boydell, & Schwartz, 2018). Negative responses may occur as a result of many reasons, including rater bias, professional jealousy, inaccessibility of assessors, busy clinical practice and non-specific feedback (Reddy et al., 2015). All of the above factors may contribute to unresponsiveness of physicians to feedback.

Gap: Surprisingly there are just few published articles that explore the impact of MSF and the factors that influence the effectiveness of MSF on physician behavior (Ferguson et al., 2014)

Hook: Despite the widespread use of MSF for feedback as a tool for workplace-based assessment (WPBA), little is known about the receptiveness of learners to the key points presented from different sources. We need to explore the reasons and dynamics of why some physicians may feel offended by MSF and consider them in planning assessment in the workplace to improve their performance.

Methods: Study settings: Study will be conducted at KEMU and Allied Hospitals.

Study Design: Qualitative Exploratory study
Study Type: Descriptive qualitative study

Study Duration: Duration of the study will be 6 months after approval of the synopsis.

Sampling Issues:

Target population: House Officers of Mayo Hospital Lahore

Accessible population: 300

Sample Size: 12

Sampling Technique: Purposive sampling.

Data Collection Procedure: This study will be carried out at KEMU/Allied Hospitals informed consent will be taken from the House officers. Clearance to conduct the study will be sought from Institutional Review Board of the hospital. No ethical issue or risk will be involved. Two focus groups will be made based on gender (male and female). A focus group discussion will be conducted by the researcher/supervisor with each focus group to see the impact of MSF on the behaviors of house officers. In this session open ended questions will be asked from each focus group and individual answers will be recorded by the researcher.

Theme: Clinical Research

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Title: Acute liver failure: Outcome and prognostic predictors

Introduction: Acute liver failure (ALF) is defined as a rapid hepatic dysfunction and encephalopathy in the absence of pre-existing liver disease. It is relatively uncommon; however, it progresses rapidly with high mortality. Globally, viral hepatitis is responsible for the majority of cases of ALF. This study aimed to determine the etiology, outcome and predictive factors for in-hospital mortality in Acute Liver Failure (ALF) patients.

Methodology: A descriptive study was conducted with ALF patients hospitalized at the Gastro-hepatology Department of Asian Institute of Medical Sciences, Hyderabad from May 2018 to September 2019. A total of 31 patients having clinical and biochemical markers suggestive of ALF were included in the study and evaluated for etiology and outcome during the hospital stay and prognostic scores (King’s College Criteria (KCC) and Model End-Stage Liver Disease (MELD)) were compared.

Results: Thirty-one patients with a mean age of 22 years, 21 (67.7%) were males. Most common etiology was indeterminate 21 (67.7%) while 5 (16.15%) were Hepatitis B and 5 (16.15%) were Hepatitis E. The in-hospital mortality was 19 (61.3%), out of which 14 (73.3%) were males, and 12 (38.7%) were spontaneously recovered. High International Normalized Ratio (INR) > 5.00 (p=0.02), MELD score >32 (p=0.049), KCC 2 or more out of 5 and sepsis (p= 0.008) were independently associated with in-hospital mortality.

Conclusion: The in-hospital mortality of ALF was significantly higher with raised INR, MELD (>32), KCC (2/5) and sepsis being the poor prognostic factors.

Keywords: Acute liver failure, MELD, KCC.
Introduction: The chromosomal abnormalities are one of the major causes of various genetic disorders that result in abnormal fetal development, abnormal physical features, growth failure, mental retardation or reproductive failure. The clinical suspicion on the basis of phenotype and mental status, helps in early diagnosis and prompt management of these patients.

Methodology: This cross-sectional study was carried out at cytogenetic department, NICH, Karachi. Samples were first cultured in RPMI-1640 supplemented with PHA (Mitogen), FBS, Penicillin & streptomycin for 72 hours at 37°C and were processed by using Colcemid, KCL and fixative. After the slide preparation Giemsa-Trypsin banding was carried out. In the last step 20 metaphases were analyzed by light microscopy and karyograms were made by Cytovision 7.2 ®.

Results: Total numbers of samples received were 40. Numerical and structural chromosomal aberrations emerged as major contributing genetic factor resulting in abnormal phenotype. There were total 11 (27.5%) cases with confirmed chromosomal aberrations. Among 15 samples received with suspicion of Turner syndrome 5 (12%) were confirmed by karyotyping. Primary Amenorrhea received 6 samples (15%) cases out of which 2 (33%) were confirmed. For Secondary amenorrhea cases were referred for karyotyping 5(12%), 7 Samples for Infertility out of which 2(5%), for Spontaneous Abortion 5 (12%) cases were received out of which 1 (2%),and 2 (5%) samples were referred for chromosomal karyotyping. These case were confirmed on chromosomal Aberration.

Conclusion: Numerical and structural chromosomal aberrations are not uncommon among the cases with abnormal phenotype. Early diagnosis and prompt treatment will help in rehabilitation of these patients especially in cases with abnormal phenotype and mental capabilities in children, delayed puberty and infertility in adults.