

# FOUNDATION UNIVERSITY MEDICAL JOURNAL



ISSN 2312-6531

Abstracts of Presentations

## AEME

(ASSOCIATION FOR EXCELLENCE IN MEDICAL EDUCATION)

### Conference 2015

“The Continuum of Education in the Health Professions: Enhancing the Quality”

Foundation University Medical College, Islamabad  
March 07-08, 2015

# FUMJ

SPECIAL ISSUE

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# FUMJ

## Foundation University Medical Journal

Special Issue 2015

ISSN: 2312-6531



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## CASE BASED LEARNING- IMPACT ON STUDENT'S TEST SCORES IN UNDERGRADUATE TEACHING

Ambreen Anwer

Armed Forces Post Graduate Medical Institute, Rawalpindi

**Purpose:** To determine the impact of introducing case based learning (CBL) in place of traditional lecture based teaching. In contrast to the traditional methods where there is more focus on accumulation of facts, Case based learning is guided inquiry based learning. In contrast to PBL which is an open inquiry CBL is more structured and focused.

**Methodology:** We planned an intervention based on "Case based learning (CBL)" as instructional strategy rather than lectures for final year MBBS. Lectures were replaced gradually by case based learning in a ratio of 1/3rd and 2/3rd. Case scenarios were displayed in the study guides and notice boards. Questionnaire directed to the students and teachers were carried out to check the satisfaction rates. after ethical approval Selected interviews were carried out of students and faculty. A comparison between the test score results of the previous year (controls 2013) and this year was made (study group 2014).

**Results:** A total of 130 students and 15 faculty members responded to the questionnaire. CBL was preferred by students (89%) and faculty (84%) across the school and learner levels. The students found the interactive method much more entertaining, more interactive which facilitated greater depth of learning, leading to a logical application of knowledge in problem solving. Teachers enjoyed the teacher-student learning partnership that the method offered and more application of clinical knowledge. Due to limited faculty they found the method labor intensive. Students taught by CBL scored significantly better both in MCQ's and viva as compared to controls (pvalue >0.5).

**Conclusions:** Learners and faculty overwhelmingly preferred CBL over lecture. Given the dense medical curriculum and need for efficient use of student and faculty time, CBL offers a useful model as compared to lectures.

**Keywords:** Small group discussions, Case based learning, Problem based learning, Undergraduate Medical Education

## STRUCTURED INTERACTIVE SESSIONS AS AN EDUCATIONAL STRATEGY IN A PAKISTANI MEDICAL COLLEGE

Matiur Rahman

Al Nafees Medical College, Isra University, Islamabad

**Purpose:** To see the effectiveness and suitability of Structured Interactive Sessions for inclusion in the curricular delivery strategy of Medical Colleges of Pakistan to enhance active interactions of students during teaching sessions.

**Method:** Tuberculosis being a common disease in our country was selected to conduct structured interactive session in 3rd year MBBS students integrating Pharmacology, Microbiology, Pathology and clinical medicine. The students were divided into groups and reading material were provided to each participant beforehand and they were asked to come prepared for the SIS. A President and secretary was appointed from each group and they helped ensure maximum participation and maintain scoreboard for their group.

Students were encouraged to interact informally in their groups, to have maximum participation by all students and were encouraged to ask questions and each question was given one point to the group. Students were encouraged to provide the answers of the questions asked and each correct answer provided by the groups were given 2 points.

A scoreboard was maintained by each group. Total Scores were calculated for each group. The group getting highest score was given a gift.

Student feedback was taken at the end of the lecture.

Self-administered course evaluation questionnaire on a likert scale was given to students to evaluate their perception about their learning. The response rate was 80%.

**Results:** 85% students found SIS as a good method of learning, 82.5% students opined that SIS improved understanding of subject and their knowledge improved after this course and most of the students were satisfied and recommended to hold this course for their colleagues. The results reveal that excellent interaction of students can be achieved successfully by introducing simple innovation in lecture delivery techniques

**Conclusions:** Hence SIS is recommended as a feasible strategy of educational delivery in Medical Colleges of Pakistan

**Keywords:** Curricular Delivery, Tuberculosis, Strategy

## FLIPPED CLASS – MAKING THAT ONE HOUR EFFECTIVE IN A RESOURCE CONSTRAINED SETTING

Afsheen Zafar

Islamic International Medical College, Riphah University, Rawalpindi.

**Background:** Lectures form a large part of teaching methods in medical colleges in Pakistan because of resource constrains in terms of available faculty, time and space. Flipped class has the advantage that it can be run with the same resources and available technology. However the attitude of our students towards this teaching modality is unknown. Therefore this study was designed to explore attitude of undergraduate medical students towards flipped class.

**Methods:** Flipped class was conducted for topics taught by surgery department in cardiovascular module in third year MBBS. After ethical approval, it was conducted by a single teacher for a class of 100. Both quantitative and qualitative data was collected. A sequential mixed methods approach was used for analysis. Quantitative data was collected through a survey questionnaire to assess students' response to the new method. A focus group was then conducted with the set of students who didn't like the method and preferred traditional lectures to understand their perspective and identify factors that potentially hinder active learning.

**Results:** 71% students participated in the survey. 84.5% students liked the method of teaching but only 74.6% wanted this method to continue. Students identified prior knowledge, fruitful interaction, better retention, better conceptualization, active learning and application of knowledge as strengths of the class. Noise, limited time, lack of confidence in self and presence of uninterested students were identified as problems for engaging in the class.

**Conclusions:** Students have a favorable attitude towards the flipped class. However successful execution requires the support of virtual learning programs to make it more manageable for a teacher to handle queries. Organization and time management is essential to satisfy all groups equally.

**Keywords:** Flipped Classroom, Reverse Teaching, Inverted Classroom, Learning and Teaching Methods.

## CASE BASED LEARNING AND TRADITIONAL TEACHING STRATEGIES: WHERE LIES THE FUTURE?

Naheed Bano

Rawalpindi Medical College, Rawalpindi

**Purpose:** The purpose of this sequential mixed method study was to explore the perceptions and satisfaction level of final year medical students of Rawalpindi Medical College about traditional teaching methods and Case-based learning (CBL) and evaluate the effect of CBL on students' performance.

**Methods:** SETTINGS Department of Obstetrics and Gynaecology, Holy Family Hospital, Rawalpindi. STUDY DESIGN Sequential mixed method study DURATION OF STUDY: January 2013 to June 2013 PARTICIPANTS AND METHODS Students expressed their perceptions on a Likert scale in a questionnaire. It was triangulated with data collected from 4 focus group discussions (FGD). Students for FGD were selected using purposive sampling. Students' performance in OSPE and long case was compared with another group who was taught with traditional methods. Quantitative data was analyzed by SPSS version 17. For qualitative data, themes and patterns were identified using content analysis technique

**Results:** Of 141 students, 134 returned completed forms giving a response rate of 95%. Gender distribution was similar in both the groups. There was no statistically significant difference in performance assessment. Strong preference for CBL was expressed by 97% as it improved their confidence (83%), clinical and presentation skills (91 & 80%), attitude and student teacher relationship (68 & 77%), strengthened link between theory and practice (90%), and integrated basic and clinical knowledge (92%). Seventy six percent stated that all teaching should be CBL. Qualitative data from SGD strongly supported these views.

**Conclusions:** Although test performance was similar in both the groups, students expressed strong preference for CBL as compared to traditional methods.

**Keywords:** Case Based Learning, Traditional Methods, Small Group Discussion.

## TEACHING PATIENT CENTERED - COMMUNICATION SKILLS TO FOURTH YEAR M.B.B.S STUDENTS

Faisal Rashid, Asma Humayyun

Al-Nafees Medical College & Hospital, Islamabad.

**Purpose:** At Al-Nafees Medical College & Hospital, Integrated system based curriculum was introduced in 2013. The teaching of attributes of professionalism and ethics were made essential elements of the curriculum and it was decided to implement them horizontally as well as longitudinally. In pursuit of achieving above mentioned objectives a workshop based 3 days long certificate course was developed & implemented for our fourth year students.

**Methods:** Different areas such as Introduction to communication, Building a relationship, collecting information, providing information, Breaking bad news and Counselling the patients/families were outlined. An eight hour divided activity spread over three days was planned. Divided in batches the students were introduced to the significance and essentiality of communication skills for the doctors in an interactive large-class format (LCF) session on the first day. In second session they worked in supervised small groups (SGD) on their selected assignments. Lastly a four hour session which included students' presentations, Role plays, videos, small group discussions (SGD) and reflective exercises was held. Both formative and summative formats of assessment were used. The difference in knowledge was assessed by pre and post activity questionnaire.

**Results:** The students demonstrated a significant improvement in their knowledge and skills of patient-centered communication.

**Conclusions:** The students are able to acquire and apply effective communication skills in their interactions with the patients.

**Keywords:** Communication Skills, Large-Class Format (LCF), Small Group Discussions (SGD)

## LEARNING STYLES & PREFERENCES AMONG MEDICAL STUDENTS OF A 5 YEAR UNDERGRADUATE DEGREE PROGRAM IN PAKISTAN USING VARK QUESTIONNAIRE: A DESCRIPTIVE STUDY

Khizar Ali

Shifa International Hospital, Islamabad

**Purpose:** There are four basic sensory modalities through which we take in and express information namely Visual, Auditory, Read/Write and Kinesthetic. We all have a preference for using either one or a combination of these modalities for learning new information. The idea behind using the VARK categorization for educational purposes is that an individual will learn best when given information in the same modality as he prefers to learn with.

**Methods:** Online version of VARK 7.1 was distributed among students of a 5 year undergraduate medical degree program (MBBS) at our institute. The form was submitted online and results were analyzed using the Standard Algorithm provided by Neil Fleming who developed the VARK questionnaire.

**Results:** 146 of 500 students aged between 18-26 years, responded the online VARK questionnaire (92 females, 54 males). Students with highest preference were Multimodal with 34.9% while with Unimodal preference were 32.9%. Results were followed by Bimodal at 19.9% and 12.3% for trimodal. Within the Multimodal Category 13% were VARK type One and 17.1% were type Two, while 4.8% were in Transition between the two categories. Those with the Unimodal Preferences, Kinesthetic(mild) was the highest at 14.4% followed by Auditory, Read/Write and Visual.

**Conclusions:** The results showed the whole diversity of learning styles utilized by the medical students. We need further studies to correlate these findings with VARK style utilized by teachers at our medical institutes as well as with their quality of learning and academic performance.

**Keywords:** Learning Style, VARK, Learning Preferences, Approach to Studies

## COMMUNICATION SKILLS TRAINING THROUGH AN INTER PROFESSIONAL EDUCATION INITIATIVE AT ALZAEIM ALAZHARI UNIVERSITY

Ismat Mohamed Mutwali

Alzaeim Alazhari University, Khartoum Bahri, SUDAN

**Purpose:** The aims of the study were to teach different health care students to learn together and gain the knowledge, skills and attitude that can help them to work together. And to encourage the undergraduate multi professions students to learn specific communication skills associated with “breaking bad news”

**Methods:** Methods: A session of training of trainer was first organized to train the staff participating in the IPE. Senior students from the colleges of medicine, nursing, anesthesia and midwifery were invited to participate voluntary in the IPE. 36 multi professions students were selected and divided into 6 multi professions groups. Selected students attended one lecture and four sessions on the IPE and the roles and responsibility of the different professions. The participants learned and practiced six different scenarios of breaking bad news. The IPE was evaluated by administration of a pre and post questionnaires to determine the attitude of the participants to the IPE and towards the training of communication skills within multi professions teams.

**Results:** Thirty multi professions students responded to the questionnaires (83.3%). The participants` responses showed that, they have gained knowledge, and become more oriented with their roles and responsibilities. The IPE training course on “breaking bad news” was accepted by all the multi professions students. The participants` overall change of attitude was significant.

**Conclusions:** The results showed that the implemented IPE initiative had positive effects on the attitude and perception of the undergraduate multi professions students and that “ breaking bad news” training is possible and practicable within multi professions teams.

**Keywords:** Inter Professional Education, Breaking Bad News, Multiprofessions, Undergraduate Students.

## EXPERIENCE WITH BLACKBOARD AS A FORMATIVE ASSESSMENT TOOL IN PEDIATRIC COURSE AT RABIGH MEDICAL COLLEGE, KING ABDULAZIZ UNIVERSITY, JEDDAH, KSA

Mukhtiar Baig

Rabigh Medical College, KAU, Jeddah, KSA.

**Purpose:** The present study elucidates the use of virtual learning environment (VLE), (Blackboard) for the formative assessment of fifth year medical students during their clinical rotation in the pediatric ward.

**Methods:** The present study was conducted at Rabigh Medical College, King Abdulaziz University, Jeddah, Saudi Arabia. First time in our college, the department of pediatrics used VLE in formative assessment of fifth year undergraduate medical students, during their twelve-week clinical rotation. Three formative assessment tests (A-type MCQs) were posted on blackboard (Bb). After one week of posting each test, the answers were made available to the students for self-assessment. Moreover, feedback sessions in the classroom were arranged at the end of each formative assessment for detailed explanation and revision.

**Results:** The majority of the students used the VLE throughout their rotation in pediatric ward and this formative assessment via VLE enhanced their performance in summative assessment. They took VLE as an opportunity of independent and self-directed learning. In their feedback students generally commented favorably on the use of Bb. Blackboard not only analyzed items but also described detailed description of the quality of MCQs, such as how many questions were difficult, easy and need revision.

**Conclusions:** The formative online assessment on Bb assisted the instructors to find out weaknesses and misconceptions among students regarding the topics. It also helped in improving the cognitive level and quality of the assessment tool. We recommend its use in all other departments.

**Keywords:** Blackboard, Assessment, MCQs

## PERCEPTIONS OF UNDERGRADUATE STUDENTS ABOUT THREE TEACHING METHODS

Mohammed Elimam Ahamed Mohammed

King Khalid University, Abha, Aseer Region, Kingdom of Saudi Arabia

**Background:** The aim of this article is to investigate the perceptions of the undergraduate students of the department of chemistry at king Khalid university about three teaching methods; lectures, practical and problem based learning sessions. A second objective is to compare the students perceptions to their performance in three different exams depending on the information gained from the three teaching methods.

**Methods:** Sixty Three students were registered for the basic biochemistry course at the faculty of science- King Khalid University. At the end of the course and before the final exam, the students perceptions about the three teaching methods were investigated through a simple questionnaire composed of four best answer questions. Fifty Nine students responded to the questionnaire. The questionnaire was analyzed and its results were compared to the students performance results in the three different final exams.

**Results:** Regarding the students perceptions about the three teaching methods; 22 students (37.3%) stated that the practical sessions were the best teaching method for them followed by the problem based learning sessions (19, 32.2%), 7 students (11.9%) preferred the lectures while 11 students (18.6%) expressed that the three teaching methods were not their favorite methods. Concerning the recalling of the information; 24 (40.6%) expressed that the information of the problem based learning sessions was easy to recall and difficult to forget followed by the information of the practical sessions (17, 28.8%) and lectures (9, 15.3%) and 9 (15.3%) stated the information of all the three methods was difficult to recall and easy to forget. The performance of the students in the final exams and their perceptions were comparable since the success percentage in the practical and problem based learning sessions and lectures were 95.2%, 82.5% and 82.5% respectively.

**Conclusions:** Although the practical and the problem based learning sessions were the best teaching methods for the bulk of the students (41, 69.5%) it is better to follow more different teaching methods to satisfy the majority of the students and to obtain better student performance.

**Keywords:** Problem Based Learning, Practical Sessions, Lectures, Perceptions, Performance

## SIMULATED PATIENTS FOR LEARNING AND ASSESSMENT: PATIENT SAFETY AND STANDARDIZED LEARNING

Amina Ahmad<sup>1</sup>, Abid Ashar<sup>2</sup>

<sup>1</sup>University of Health Sciences, Lahore, <sup>2</sup>FMH medical and Dental College, Lahore

### Purpose:

1. What is the possible use of simulated patients in a Pakistani context where teaching hospitals are swarming with real patients?
2. How in your opinion, social accountability can force the medical profession in Pakistan to consider patient safety as an important indicator of good medical practice and use of simulated and standardized patients as a mean to achieving this indicator?

**Methods:** An open-ended internet-based survey was conducted with n=71 medical teachers from para-clinical and clinical fields, working in both public and private sector medical colleges. Confidentiality and anonymity were ensured and the purpose of data collection was clearly communicated. After 2 electronic reminders, 27 participants responded. The qualitative data was summarized under 2 categories (themes), word frequency count was done and a constant iterative approach was adopted to verify the plausibility of interpretations by 2 researchers.

### Results:

**Theme 1:** utility of SPs in the presence of real patients, which highlights the significance of learning on real patients however, it also delineates the nature of learning with real patients only as it predominantly remains opportunistic.

**Theme 2:** social accountability: a driving force to promote use of SPs. The ethical imperative: "first do no harm", is every healthcare professional's first priority and underpins the philosophy of 'patient safety'. The wave of accountability for health professionals is urging the profession to look for alternative and credible clinical learning materials.

**Conclusions:** Use of SPs provides authentic learning opportunities in many clinical situations and ensures standardization of learning activities. Social accountability is a strong driving force to explore the utility of this option albeit with a certain degree of caution.

**Keywords:** Flexner Report, Simulated Patients, Standardized Patients



## EVOLUTION OF PROFESSIONAL IDENTITY AMONG MEDICAL STUDENTS OF FUMC

Uzma Bano, Anis Ahmed

Foundation University Medical College, Islamabad.

**Background:** To measure the strength of professional identity formation along five years of medical education from first to final year MBBS among students of FUMC.

**Methods:** It was a cross-sectional study carried out at FUMC, Rawalpindi from October 2014 till March 2015. All medical students from first year to final year MBBS were included in the study through survey sampling. Students not giving consent and absent on day of data collection were excluded from the study. A structured questionnaire was used that had two parts; Part 1: measured the strength of Professional self-image and is adapted from Adams et al. Part 2: measured the strength of professional identity as it is reflected in different professional activities and is adapted from the Crossley et al. Each professional identity theme was rated using a 5-point Likert scale. Data was entered and analyzed using SPSS version 17.

**Results:** Our study included response from 618 students. Five responses were rejected due to incomplete data. The final data analysis included 613 students. It included 152, 127, 130, 104 and 100 students from first, second, third, fourth and final year respectively. Age ranged from 16 to 28 years with a mean of  $20.5 \pm 1.7$  years. Overall 162 (26.4%) were males and 451 (73.6%) were females.

After reverse-scoring the responses for the negatively-keyed items (item number 3-5 in part A) the possible mean score was 1 to 5 on professional identity scale of Adams. The mean scores were  $4.108 \pm 0.35$ ,  $4.081 \pm 0.37$ ,  $3.931 \pm 0.53$ ,  $4.14 \pm 0.49$  and  $4.15 \pm 0.42$  for first, second, third, fourth and final year respectively.

When results of PSIQ of Crossley were analyzed the scores increased progressively across the five years of the MBBS program in most of the professional activities (Figure 2). However there was a decline in third year in some of these activities similar to a decline seen in scores on professional identity scale of Adams. The clinical years of fourth and final year are very helpful in building professional identity among students.

**Conclusion:** The start of clinical attachments (in this case fourth and final year) causes a step-change in the development of professional self-identity. Changes are required in second & third year curriculum so as to foster development of professional identity among students of preclinical years.

**Keywords:** Professional Identity; Medical Students; Professionalism.

## LEARNING ENVIRONMENT OF UNDERGRADUATE STUDENTS DURING MATERNAL, NEONATAL AND CHILD HEALTH CLERKSHIP

Azra Amerjee

Aga Khan University Hospital, Karachi

**Purpose:** The purpose of this study is to evaluate the educational environment of the community health setting, based on the perception of the students, in the MNCH clerkship. Using the modified DREEM questionnaire, the perceptions of medical students regarding learning environment, course organization, perception of atmosphere and social self-perception will be evaluated.

**Methods:** Study Setting: Primary Centres and Secondary centers under the auspices of Aga Khan Health Services, Pakistan (AKHSP) Research Design: Cross sectional Quantitative method. Sampling Technique: Purposive sampling Study population: All students who consent to participate from the entire class of fourth MBBS. Sample size: As no intervention is being planned therefore we do not have to calculate any specific sample size. Data collection tool: Modified DREEM questionnaire Data collection procedure: This is a four week clerkship with 10 to 12 students in each batch who are rotated at two primary health Centers and a Secondary hospital affiliated with AKUH. They are supervised by Lady Health Visitors (LHV's) Medical Officers and Consultants at the centers. Teaching and learning sessions are held at AKUH. After the end of MNCH rotation exam, and after informed consent, students will be asked to fill the modified DREEM questionnaire. Anonymity will be maintained by allotting them serial numbers in place of names Data gathered will be entered in SPSS version 19. For analysis of the quantitative data, descriptive analysis will be done along with the frequencies mean and standard deviation of the total and subscale scores of the DREEM.

**Results:** The results of this study will help us to identify and rectify any deficiencies in this program, so that it can be further improved.

**Conclusions:** This evaluation will help us to identify any deficiencies and rectify them, so that the program can not only be continued successfully in AKUH but also guide other institutions in Pakistan as well as other third world countries in establishing similar community oriented programs. This study will help us to

**Keywords:** DREEM, Learning Environment, Community Based Clerkship

## ASSOCIATION OF ACADEMIC STRESSORS WITH SLEEP DISTURBANCES IN MEDICAL STUDENTS: IS PSYCHOLOGICAL STRESS A MEDIATOR?

Ahmed Waqas

Institute of Dentistry, CMH Lahore Medical College, Lahore

**Purpose:** To assess Psychological stress, anxiety, depression and sleep disturbances are highly prevalent in medical students.

Medicine is one of the most stressful fields of education because of its highly demanding professional and academic requirements. Psychological stress, anxiety, depression and sleep disturbances are highly prevalent in medical students.

**Methods:** This cross-sectional study was undertaken at CMH Lahore Medical College and Institute of Dentistry in Lahore, Pakistan, and was approved by the CMH LMC Research Ethics Committee. Students enrolled in all yearly courses for the MBBS degree were included. The questionnaire consisted of four sections: 1) demographics 2) a table listing 34 potential stressors, 3) the 14-item Perceived Stress Scale (PSS-14), and 4) the Pittsburgh Quality of Sleep Index (PSQI). Data were analyzed in SPSS v. 20. Logistic regression was run to identify associations between group of stressors, gender, year of study, student's background, stress and quality of sleep.

**Results:** Total response rate was 93.9% (263/280 respondents returned the questionnaire). The mean PSS-14 score was 30.04 (6.97). Logistic regression analysis showed that cases of high-level stress were associated with year of study and academic-related stressors only. Univariate analysis identified 157 cases with high stress levels (59.7%). The mean PSQI score was 8.09 (3.12). According to PSQI score, 203/263 respondents (77.02%) were poor sleepers. Logistic regression showed that mean PSS-14 score was a significant predictor of PSQI score (OR 1.99,  $P < 0.05$ ).

**Conclusions:** We found a very high prevalence of academic stress and poor sleep quality among medical students. Many medical students reported using sedatives more than once a week. Academic stressors contributed significantly to stress and sleep disorders in medical students.

**Keywords:** Psychological Stress, Academic Stressors, Sleep Difficulties

## SOURCES AND PERCEIVED LEVEL OF STRESS AMONG HEALTH STUDENTS - EXAMPLE FROM SAUDI ARABIA

Shahzada Junaid Amin

College of Applied Medical Sciences, University of Hail, Hail, Kingdom of Saudi Arabia

**Purpose:** The primary aim of this study was to evaluate the stress levels and sources of stress among under-graduate applied medical college students. A secondary aim was to provide recommendations for stress management in health students.

**Methods:** A cross-sectional survey was conducted among the undergraduate students. The college research ethics committee (CREC) approved the research project. The students were asked to complete the Perceived Stress Scale 10 (PSS) questionnaire and the Undergraduate Stress Questionnaire (USQ). The study was conducted at college of applied medical sciences, university of hail, Saudi Arabia. All the registered students in physiotherapy, clinical nutrition, diagnostic radiology and clinical laboratory sciences were enrolled in the study ( $n=85$ ). The response rate was 90.1%. The data was analyzed using the statistical package for the social sciences (SPSS Version 15).

**Results:** The academic factors were the most reported source of stress as compared to personal, and social factors in all the academic programs. The highest perceived stress score was present in the final year, which shows the clinical work load demands more attention and energy. The study showed that stress level was higher in female (95%) as compared to male student (80%) but this change was not statistically significant ( $p = 0.26$ ).

**Conclusions:** The study confirmed that stress is a part of student life in healthcare students. The stresses outside the reach of the college authorities are difficult to control, academic support, including providing a conducive learning environment, and academic counselling can reduce the academic related factors.

**Keywords:** Health Students, Perceived Level of Stress, Sources of Stress.

## USE OF (BIO)INFORMATICS FOR BETTER PATIENT HEALTHCARE

**Matloob Khushi**

Children's Medical Research Institute, Westmead, Australia

**Background:** Digital high resolution imaging has been playing a vital role in diagnosis and management of diseases. However obtaining timely opinions over the internet from geographical distant clinicians are hampered by the large file sizes of the digital images.

**Methods:** We have employed open source tools in addition to in-house developed tools which make it easy to view, pan and zoom high quality images on low bandwidth internet.

**Results:** We have developed tools that convert high resolution digital slide images into tiles of low-resolution images to transmit over the internet. The high resolution portion of the image is loaded when clinician/pathologist zoom into particular section of the image and seamlessly takes over the current view, thus making it easy to obtain opinions for remote experts. We have also been using these tools for automatic computational analysis of the images.

**Conclusions:** In health management obtaining feedback from collaborating clinicians becoming a normal practice. Therefore our tools can be used to view large digital images remotely and can help clinicians who are still using conventional internet technologies and not yet fibre-optic ready. Bio(informatics) is shaping the way how we treat patients. At the University of Sydney a great deal of research has been going on for personalized medicine utilising latest technologies such as feedback therapy from wearable systems that monitor muscle and other activities. In addition personalised medicines have also been prescribed by employing next-generating sequencing to decide drug response of a patient. Therefore (bio)informatics subject should be included in the medicine curriculum to develop medical graduates necessary skills in embracing these latest technologies in future.

**Keywords:** Informatics, Bioinformatics, Digital Imaging, Telehealth, Personalised Medicine

## DO WE PRACTICE WHAT WE KNOW; A STUDY COMPARING ERGONOMIC PRACTICES

**Rehana Rehman**

Aga Khan University, Karachi

**Purpose:** The objective of the study was to compare the awareness and practices of computer ergonomics amongst a diversified group of individuals.

**Methods:** A questionnaire based cross-sectional study was conducted to compare the awareness and practices of ergonomic principles between two groups. Adult participants, irrespective of gender were grouped; Group I comprising of professionals from different occupations like doctors, Information technology professionals (IT), bankers, marketing individuals and teachers and group II comprising of computer science students. The responses included awareness and practices of keeping ideal height of chair, seat pan, arm rest, back rest, print at eye level and screen free of glare. Responses were compared by application of chi square test. Results declared significant with p value < 0.05.

**Results:** Data was collected from 318 participants in group I and 198 from group II. Participants from group I had significantly more information than those in group II regarding certain ergonomic principles (height of chair p=0.001, seat pan p=0.002, computer screen filter p

**Conclusions:** Those who were more informed exhibited safer practices regarding ergonomic principles and this was significantly higher amongst professionals. Ergonomic designs with structured ergonomic awareness sessions and a strategy to remove the gap between theory and practice is needed.

**Keywords:** Ergonomics, Work related musculoskeletal disorders, Musculoskeletal symptoms

## ROLE OF SKILL LABORATORY TRAINING IN MEDICAL EDUCATION - STUDENT'S PERSPECTIVE

Muhammad Alamgir Khan

Army Medical College, Rawalpindi

**Purpose:** Current study was planned to evaluate the perceptions of medical students about skill laboratory training.

**Methods:** This cross sectional study was conducted at Army Medical College from October to December 2014. 137 students of final year MBBS who underwent skill laboratory training were recruited through convenience purpose sampling. Students not exposed to skill lab training were excluded. Data collection tool was a questionnaire having twenty three questions with responses on Likert Scale as strongly disagree, disagree, agree and strongly agree coded as 1, 2, 3 and 4 respectively. Mean±SD was calculated for continuous variables whereas frequency and percentage for categorical variables. One sample Chi Square test was used to determine difference between various categories at alpha value of 0.05. Cronbach's Alpha was used to determine reliability.

**Results:** There were 78 (57%) male and 59 (43%) female students with mean age of  $22.59 \pm 0.74$  years. The response rate was 68.5%. Cronbach's Alpha was 0.84 showing high reliability. Mean of all the 23 items was  $63.85 \pm 8.71$  reflecting a high inclination of students towards skill lab training. Frequency of students responding in favor of skill lab training was significantly high (p-value < 0.05).

**Conclusions:** Medical students perceive skill laboratory training as a favoured learning strategy as compared to practicing on real patients for acquisition of clinical skills. The stake holders need to give due attention and importance to this highly effective aspect of medical education.

**Keywords:** Skill Lab, Clinical Skills, Manikins, Simulators

## USING TECHNOLOGY TO MANAGE STUDENTS' LEARNING IN PRIVATE MEDICAL SCHOOL

Ghulam Mustafa Lodhi, Rukhshanda Zaman, Dr. Rukhsana Ayub

Al Nafees Medical College, Isra University, Islamabad

**Purpose:** To assess the use of technology to manage students learning in a private medical school.

**Methods:** Al Nafees Medical College, Isra University Islamabad implemented integrated, spiral, modular, competency based curriculum in March 2013. Learning Management System using Moodle software for students and faculty to facilitate for curricular management was introduced at the start of this initiative. Additionally learning resources as well as module feedback system was also incorporated. The system is fast online media which is not only available on desktops and laptops but is customized to use smoothly on mobiles also.

The software provides for students & Faculty, module calendar containing classes timetable for lectures & exams, end of module feedback by students of the faculty as well as the module, lectures availability on daily basis in ppt, pdf and doc form, Online quizzes, attendance updates, latest news and seminar update. Additionally study guides are provided to students only via LMS website. Online books are available for students to read/print/download. The assessment unit is connected to LMS in the unique way that no result is provided to the students unless they provide the feedback. This feedback is the considered for the evaluation of our program.

**Results:** An online questionnaire was submitted to the 300 students using LMS. Over 70% students were very satisfied with LMS. 50% students were daily users with remaining using it at least once a week. 77% found it very easy to navigate the Moodle.

**Conclusion:** Technology is highly efficient as a toll to manage learning of students.

**Keywords:** Competency Based Curriculum, Learning Management System, Moodle Software

## PAPER BASED AND COMPUTER BASED (SIMULATION) INSTRUCTIONS ON CLINICAL REASONING SKILLS OF UNDERGRADUATE MEDICAL STUDENTS: A RANDOMIZED CONTROLLED TRIAL

**Masood Jawaid**

Dow University of Health Sciences, Karachi

**Purpose:** This study was done to find out difference in clinical reasoning skills after paper based and computer based instructions (simulation) among medical students.

**Method:** Fifty Two Semester VI medical students of Dow University of health Sciences were included in this study. A tutorial delivered to all students about clinical reasoning and its importance in clinical practice. Student were divided randomly into two groups. Group A received paper based instructions while other Group B received computer based instructions (flash based scenarios developed by Articulate Storyline) focused on clinical reasoning skills about history taking of acute and chronic upper abdominal pain. After one week both groups were tested by two OSCE stations (acute and chronic pain history taking skills in relation to clinical reasoning).

**Results:** There were 27 students in Group A while 25 in Group B. Mean OSCE score of group A was  $28.6 \pm 9.4$  while group B was  $38.5 \pm 6.0$  assessed was statistically significant difference ( $p < 0.001$ ) in clinical reasoning skills of students.

**Conclusion:** A computer simulation program can enhance clinical reasoning skills. This technology could be used to acquaint students with real-life experiences and identify potential areas for more training before facing real patients.

**Keywords:** Flash Based Scenarios, Articulate Storyline, Clinical Reasoning Skills

## COMPARISON OF SCORES BETWEEN GLOBAL RATING AND OSLER- IS THERE ANY DIFFERENCE?

**Shazia Fakhra**

Shifa College of Medicine, Islamabad

**Purpose:** This study was intended to know the correlation of marks obtained by two different assessment tools with the total marks, based on the hypothesis that there is a difference in the scores of students assessed by two separate assessment tools i.e global rating and Objective Structured Long Examination Record (OSLER).

**Methods:** This study was conducted at Shifa College of medicine. The subjects were all fourth year students undergoing internal assessment. The alternate batches of students (sample size 94) were assessed in their long case by global rating and OSLER method. The marks obtained in long case by these methods (30 marks) were compared with the total marks (70 marks). Data was made in SPSS version 14. In addition to basic descriptive statistics, Alpha coefficient, inter item correlation and P- value is calculated.

**Results:** The mean marks of students assessed by OSLER method is  $68.86 \pm \text{SD } 13.39$  while mean of total marks of the same group is  $43.62 \pm \text{SD } 8.4$ . Alpha co- efficient of this group is 0.651 while inter item correlation is 0.483. Correlation was found significant with P value 0.001. The mean of marks obtained by global rating method is  $64.822 \pm \text{SD } 10.4$  while the mean of total marks of this second group is  $65.56 \pm \text{SD } 9.67$ . Alpha coefficient of this group is 0.592 while inter item correlation is 0.420 with a P-value of 0.003.

**Conclusions:** OSLER method was found to have slightly better correlation with the final scores as compared to global rating with p- value of 0.001 and should be applied for scoring of long cases.

**Keywords:** OSLER, Global Rating, Long Case

## RELIABILITY AND VALIDITY OF CHART AUDIT IN ASSESSING REPORTING SKILLS OF RADIOLOGY RESIDENTS

Naila Nadeem

Aga Khan University, Karachi

**Purpose:** In this pilot study, we assessed the reliability and validity of a workplace-based assessment tool—Bristol Radiology Report Assessment Tool (BRRAT)—for evaluating radiology trainees' reporting skills.

**Methods:** Three residents of year I, II and III were randomly selected out of a total pool of 20 residents. Five reports of each resident pertaining to different specialties were randomly selected from October to December, 2014. Each report was assessed by two assessors using BRRAT. Assessors were one faculty member with more than five years of experience and one year V resident. Cronbach's alpha coefficient was calculated as a measure of internal consistency. Pearson correlation coefficients were calculated as a measure of intra-rater and inter-rater correlation. Construct validity was evaluated by sharing the study tool with seven senior faculty members.

**Results:** All faculty members who evaluated the study tool were satisfied with it suggesting good construct validity. Cronbach's alpha coefficient was 0.804, which reflected excellent reliability and internal consistency. Pearson correlation coefficients for intra-rater and inter-rater correlations were 0.828 (p

**Conclusions:** Chart audit is a reliable and valid method of assessing reporting skills of radiology residents. This workplace-based assessment tool may be used in formative assessments for evaluating radiology trainees' reporting skills.

**Keywords:** Assessment, chart audit, radiology reports, BRRAT

## MINI-CEX: A PRIVATE MEDICAL COLLEGE'S EXPERIENCE OF WORKPLACE BASED ASSESSMENT IN FAMILY MEDICINE CLERKSHIP SETTING

Iram Khursheed

Ziauddin University, Karachi

**Background:** Feedback is pivotal in students' learning. Mini-CEX provides an opportunity for feedback on learners' performance by clinical teachers. We intended to initiate mini-CEX as workplace based assessment strategy across all clinical disciplines at undergraduate level of health-care-professions. Objectives: 1. To evaluate faculty perceptions of mini-CEX as an assessment and feedback tool 2. To determine the effectiveness of mini-CEX by correlating the scores of mini-CEX and OSCE

**Methods:** Setting: Department of Family Medicine (FM) at Ziauddin University. We adapted the mini-CEX tool, conducted faculty training and piloted it in FM clerkship in 2010. Study population: third year students attending FM clerkship & FM faculty Sample size: students: n=92 (M=38, F=54). Faculty n= 7 Data collection tools: Mini- CEX and OSCE scores were obtained from FM department. Faculty responses were recorded on a 5 point likert scale Study Design: Retrospective Methods of analysis: Correlation between Mini-CEX and OSCE scores was determined using Pearson Correlation. Results were calculated at p-value 0.05. Frequencies & percentages were calculated for qualitative data. Data was analyzed through SPSS v.20.

**Results:** A positive Pearson correlation of 0.272 was obtained between the mini CEX results and OSCE score. Opinion of the Family Medicine faculty regarding training and feasibility in conducting mini-CEX showed that all (100%) found Mini-CEX feasible with respect to: easy organization (57%), less time consuming (71%), effectiveness in student performance (71%). It enhanced the following skills of students; patient centered data gathering (71%), professionalism (70%), communication skills (85%) clinical judgment (70%) and confidence (100%)

**Conclusions:** Mini-CEX is feasible and acceptable to both students and teachers. The opportunity of immediate feedback is valuable to enhance learning process. We recommend its use across all undergraduate clerkships within the institution

**Keywords:** Mini-CEX, Clerkship, Assessment

## ASSESSMENT OF SERVICES PROVIDED TO AND BY THE HEALTH CARE PROVIDERS AT DISTRICT HEADQUARTER HOSPITAL OF PUNJAB, PAKISTAN

Adeela Rehman

Fatima Jinnah Women University, Rawalpindi

**Purpose:** A study was designed to explore the doctor's performances and challenges faced at public hospitals.

**Methods:** The study was conducted in three department i.e: Surgery, Medicine and Gynecology. Quantitative research design was used to explore the doctor's performances, facilities available and their satisfaction with the workload and facilities provided by hospitals.

**Results:** The findings of the study indicated that although doctors are competent in their profession and work hard to fulfill their duties, but due to over workload their satisfaction with their job and facilities is not good. The findings also indicated that doctors also had to face some problems at hospital such as long working hours, lack of availability of rest rooms, no transport facilities and less salaries etc.

**Conclusions:** It is concluded that doctor's performance at public care health services is good but they are not stratifies with the services available at DHQs. The study recommended that the facilities at public health care services for the doctors must be noticed improve according the requirement of the doctors

**Keywords:** Health care professionals, District Headquarters Hospitals, Assessment of Doctors

## CLINICAL PORTFOLIO AS AN AUTHENTIC ASSESSMENT OF CLINICAL COMPETENCY

Bhavani Veasuvalingam

INTI International University, Nilai, Malaysia

**Background:** Performance assessment being subjective demands observational skill and as we climb higher the Miller's pyramid, the authenticity escalates. In order to allow objectivity in performance test, Downing S, 2009 expressed the value of portfolio being potentially authentic in assessing students' competency. A myriad of benefits gained from the use of portfolio in professional educational activity:

**Methods:** Summary of work Malaysian Qualifying Framework (MQF) similar to the European Qualifying Framework (EQF) focuses on 8 domains of learning outcomes identified as knowledge, practical skills, social skills and responsibilities, values, attitude and professionalism, communication, leadership and team skills, problem solving and scientific skills, information management and lifelong learning skills, managerial and entrepreneurship skills. These specified learning outcomes resemble clinical competency as defined by many literatures (ABIM, 2002), R.M Epstein and Hundert E.M, 2002 and B.Katharine 2010.

**Results:** Summary of results A clinical portfolio was developed to measure clinical competency defining the 8 domains of learning outcome. This portfolio is derived from "Omnibus" assessment portfolio" suggested by Steven Downing where multidimensional content of learner's accomplishment provided over time and justifies the learning objectives. The 8 domains of learning outcomes will be assessed through the clinical portfolio by attaching evidence of clinical activity as a basis to measure clinical competency. Criterion referenced assessment was developed using the same 8 learning outcome to assess the students competency level. 95% of the students who used the portfolio felt it was a useful tool in enhancing their clinical work.

**Conclusions:** Clinical portfolio could be a valuable tool to cultivate soft skills among students' during clinical training and the learning outcomes should be written explicitly.

**Keywords:** Clinical portfolio, Assessment, Attributes, competency

## ASSESSING THROUGH BLUE PRINTING: WORK SMARTER

Khadija Iqbal

Al Nafees Medical College Isra University, Islamabad

**Purpose:** Objective of this study was to determine the construct and content validity of the blueprint by doing post hoc exam analysis.

**Methods:** We developed an examination blueprint of neurosciences module for the class of second year for the year 2014. The blue print was developed for second year M.B.B.S and strength was 100 students. It was summative assessment. The neurosciences module included disciplines of Anatomy, physiology, biochemistry, behavioural science, Pharmacology and community medicine. To develop a blue print, the disciplines were requested to design their assessments keeping in mind the level of cognition (recall, application, problem solving, etc) and the relative importance of each element. The purpose of assessment was to correlate knowledge with the application in neurosciences module.

**Results:** The results of post hoc analysis showed that internal consistency and reliability (Cronbach's alpha/KR21) of this test was 0.74. There were two items that do not discriminate between the poor performing and high achievers in a class. There were three items which were very hard (P0.70).

**Conclusions:** A well-constructed blueprint can lead to validation of curricular content and learning objectives.

**Keywords:** Blue Print, Neurosciences Module, Validity, Post Hoc

## PREDICTIVE VALIDITY OF ONE BEST MCQ SCORING QUESTIONNAIRE

Syed Moyn Aly

College of Medicine, Taif University, Taif, KSA

**Purpose:** The Objectives of the study are to find out the psychometric properties of the questionnaire and its ability to predict average difficulty index MCQs remains dubious till post exam item analysis is done.

**Methods:** This study took place at College of Medicine, Taif University. A questionnaire was developed based on NBME guidelines. Theory examination from one integrated module was considered and evaluated by three independent evaluators who did not discuss the results with each other. Based on the questionnaire, every item was given a score. After scores for all items were collected, they were correlated with item difficulty and discrimination.

**Results:** It was found that there was positive and significant correlation  $r = 0.45$ ,  $p = 0.00$  between the scores and discrimination index. The correlation between scores and difficulty index was positive and significant for moderate difficulty items ( $r = 0.57$ ,  $p = 0.01$ ). Scores did not correlate significantly with difficult and easy items ( $p = .23$  and  $p = .45$  respectively). All calculations were done on SPSS 17.0.

**Conclusions:** This questionnaire seems to be of value in predicting item quality. If used suitably by faculty members who are trained in developing One best MCQs, this questionnaire can prove to be an asset in the process of pre-exam item analysis. It would help concerned faculty members delete items or improve them before they are administered. The item scoring questionnaire seems to be of value in this preliminary exploratory study. There is need for further analysis in order to establish its true value.

**Keywords:** One-Best MCQs, Predictive Validity, Quality Assurance, Questionnaire



## IMPROVING VALIDITY OF TRADITIONAL TABLE OF SPECIFICATIONS (TOS) FOR MCQ'S USING CALGARY MODEL: IMPLICATIONS AND LESSONS LEARNED

Syed Sheeraz ur Rahman

Liaquat National Hospital & Medical College, Karachi

**Purpose :** Many medical colleges in Karachi like our institute are following the traditional TOS as per the guidelines of its affiliated university. This guideline for TOS is based on percentages and topics list, which do not produce content validated TOS. Therefore LNHMC after seeking approval from competent authorities, developed TOS for final year surgery MBBS, to improve the content validity and reliability of the existing TOS using diagnosis based model developed by content experts.

**Methods:** Study was started after formal approval from the research committee. Ethical exemption is applied for and it already in the process. Trained Faculty in Basic Medical Education Courses was requested to submit list of diagnosis along with their impact in terms of patient outcomes and weightage in terms of frequency for final year surgery MBBS exams. This list was then organized for the required paper content and topic list. The content was further divided for MCQ's which were longitudinally aligned in domains of basic sciences, investigation, diagnosis and treatment. Total numbers of items were calculated using the Calgary model. Blueprint and content duplication was prevented through this longitudinal alignment. The model was then peer reviewed and approved by the content experts and medical educationists. Data was then analyzed for observed changes using descriptive statistics expressed in percentages. Both TOS were then compared for correlation using Pearson correlation and concordance between two groups was calculated using KAPPA.

**Results:** Major 16 domains of the traditional curriculum were analyzed and compared. Concordance / agreement level was 0.044 and correlation coefficient was 0.394 reflecting poor correlation among the traditionalist and expert based developed TOS. Highest disagreement was observed in domains like principles of surgery, critical situation, head and neck and thyroid, skin and soft tissue disorders, chest and thoracic wall disorders, GIT, abdomen pelvis and hernia, urinary bladder pathologies, breast and external genitalia pathologies having wide disagreement with score deviating more than 2 standard deviation when calculated using exploratory descriptive statistics.

**Conclusions:** Content validity and reliability of the high stakes examination is improved with input from trained faculty. Calgary model can be adopted to calculate items required for MCQ's for traditional TOS however poor correlation exists between the two models.

**Keywords:** Content Validity, Blue print , Table of Specifications, MBBS, Calgary model, Traditional Curriculum, MCQ's

## THE QUIZMAKER PROGRAM, AN INNOVATIVE FORMATIVE ASSESSMENT TOOL FOR HISTOLOGY

Fauzia Nausheen

Florida International University, Herbert Wertheim College of Medicine, Miami, Florida, USA

**Purpose:** We present two Quizmaker Histology Programs (QHP) offered to 1st and 2nd year students as a mandatory component and student feed-back.

**Methods:** Quizzes were prepared in Articulate Quizmaker 09 online program, using photographs of H&E stained histological slides. The program was offered to FIU Medical Students during 3 subsequent years (320 students in total). Feed-back was given by all students through course evaluations with grades between 1 ("disagree") and 5 ("totally agree"). Moreover, a Survey monkey was performed (total response: 50% of students).

**Results:** In course evaluations, students gave a 4.3 average rating to the statement "The Histology and Radiology quiz maker programs helped me to clarify concepts and identify areas of deficiency". In their narrative comments, students wrote that the program was extremely helpful, integrated histology with other preclinical subjects and taught to recognize histological structures and study general concepts. They stated that they greatly benefited from the program and thanked us for preparing it. In the survey, 70% agreed that "QHP is an excellent supplemental resource to review histology"; 67.5% that "There should be more quizzes in histology in other organ systems", 60% that "QHP helped me to become aware of my misconceptions of histology and correct them", 57.5% that "QHP helped me gain a better understanding of the concepts of histology" and 50% that "Reviewing histology through QHP made histology more interesting".

**Conclusions:** QHP is a very useful tool for formative feed-back and self-assessment, which is highly appreciated by the students. We plan to add similar tools to the histology teaching of organ systems.

**Keywords:** Formative Assessment, Quizmaker, Histology, Online Teaching

## ASSESSMENT OF RISK FACTORS OF AUTISM

Saira Jahan

Riphah College of Rehabilitation Sciences, Riphah International University, Islamabad

**Objectives:** Determination of the risk factors commonly involved in autism, provide fundamental information needed for improving quality of life and find cause-effect relationship to help our effort to prevent autism.

**Methods:** Data was collected from different hospitals, Autism resource centers, schools and academies for special children located at Rawalpindi and Islamabad from January 2014 to December 2014. Two groups of children were participated in the study, one with diagnosed case of autism ASD (n=101) and the other one is control group (n=233) without any comorbidity. Diagnostic cases of autism under 10 years of age were included in the study. While the children with any comorbidity like neurological, musculoskeletal and cardiopulmonary conditions were excluded from the study. Self-designed structured questionnaire was used. Questions were first explained and asked to parents of autistic children and then filled by study authors themselves. Statistical analysis was done by using SPSS Vs 20.

**Results:** It was a case control study, sample size was 334 in which 101 belong to case group with a diagnosed case of autism and 232 were taken as control. Prenatal risk factors like stress, vitamin D deficiency, folic acid deficiency, hypothyroidism, blood group incompatibility with mothers, children born in spring and parental age are the strong causes to develop autism in children.

**Conclusions:** Risk factors causes autism in our study are mother iron deficiency anemia, vitamin D deficiency, advanced parental ages, hypothyroidism in mother, blood group incompatibility with mothers and children born in spring are the strong causes to develop autism in children.

**Keywords:** Autism, Risk Factors

## PLAGIARISM DETECTION SOFT WARES: OVERVIEW OF SOME USEFUL TOOLS FOR MEDICAL WRITERS AND EDITORS

Farooq Azam Rathore

CMH Lahore Medical College, Lahore

**Purpose:** Aim of the study is to present an overview of the utility of the plagiarism detection softwares with in-depth discussion about few of them.

**Methods:** An electronic literature search was carried out at Medline, OVID, Google scholar, Science direct, Springerlink etc. (1960-2014; English language; Boolean operators) with key words; medical writing, scientific writing, medical ethics, ethical writing, good clinical practices, plagiarism, fraud detection tools, software, free and subscription. Websites of Retraction watch, CPSP and HEC were explored for further insight.

**Results:** We provide an overview of the selected nine plagiarism detection soft wares and websites. A file is uploaded for comparison or text is entered in the search box on these websites. These websites then compare the document text against millions of articles, databases and webpages online. A report is generated which, in most of the cases not only highlights the suspicious and plagiarized material but also gives a reference to the documents from where the material might have been taken. Some of the websites and soft wares give an estimate of the similarity index.

**Conclusions:** It is recommended that the universities, teaching institutes medical colleges and the CPSP should procure these resources and check the thesis, assignments and dissertations for possible plagiarism.

**Keywords:** Medical Writing, Writing Skills, Ethics, Plagiarism, Scientific Writing.

## DEMOGRAPHIC AND EPIDEMIOLOGICAL TRENDS OF CEREBRAL PALSY CASES AT PIMS HOSPITAL, ISLAMABAD

Muhammad Naveed Babur, Mubasshira Sabir, Waqar Ahmed Awan

Pakistan Institute of Medical Sciences, Islamabad

**Background:** Cerebral palsy (CP) is a non-progressive injury or disorder in the brain happening during intrauterine life or the prenatal period and characterized by paralysis, spasticity or abnormal control of movement or posture. A child with cerebral palsy may have a few of the signs and symptoms together with the delay in developmental milestones, atypical tone, abnormal gait, speech problems and some psychological disorders.

**Methods:** A Cross sectional survey of 311 participants at PIMS Islamabad was conducted in 6 months from February to July 2013. Data collection tool was a questionnaire. Data was collected in hospital settings for CP patients. The data was tested by using SPSS version 20.

**Results:** After the statistical analysis the results was like that in 311 patients of CP, 75 % children were under 3 years of age, 50% were male, about 40% CP children were with low birth weight and approximately 38% were with normal birth weight. 82% were preterm babies and 59% had gestational infection and 60% had positive birth asphyxia. 52% children had fits and 71 % children had hypertonic spastic tone and 75% are quadriplegic.

**Conclusion:** It is concluded that the frequency of spastic quadriplegic in association with other groups of impairments is very common in males under the age group of less than 3 years. The main causes as observed by the research are premature deliveries, low birth weight (<2500 g), maternal infections, poor maternal health care, history of perinatal birth asphyxia, low socioeconomic status of parents, and no easy access to hospitals at the time of labor.

**Key words:** Cerebral Palsy, Maternal Health

## HEALTH PROFESSIONAL ATTITUDE TOWARDS PERSONS WITH DISABILITY

Arshad Nawaz Malik

Riphah International University, Islamabad

**Purpose:** The objective of this study is to determine the attitude of under and post grad students towards persons with disability

**Methodology:** A descriptive analytical study was conducted to analyze the attitude of post grad and under grad physical therapy students towards persons with disability. A sample of 231 (55 post grad and 176 under grad) was recruited through purposive sampling. The standard tool Attitude Towards Disabled Person (ATDP) A & B Performa were circulated to all participations. Brief demographic information was also included and finally statistical analysis was drawn through t test in SPSS v. 20.

**Results:** The mean personal score of Post grad was 9.50 and mean professional score was 7.36. The mean personal score of undergrad was 24.03 and mean professional score was 18.05. There was difference in undergrad as compare to post grad scores.

**Conclusion:** It was, therefore, concluded that the mean personal ATDP-A score did differ significantly from the mean professional ATDP-B score. It shows that students of under grad students have a more positive personal attitude towards disability. The post grad students have no significant difference in both. There is need to modify the curriculum about the significance of disability in under grad.

**Keywords:** Students, Disabled persons, Personal Attitude, Professional Attitude.

## STUDENT'S PERCEPTIONS OF THE LEARNING ENVIRONMENT IN A PRIVATE DENTAL COLLEGE OF KARACHI

Muhammad Junaid Lakhani

Jinnah Medical & Dental College, Karachi

**Purpose:** A positive educational environment can provide the basis of positive change in the learning outcomes. The Dundee Ready Education Environment Measure (DREEM) questionnaire was used to assess the learning environment as perceived by students of Jinnah Medical and Dental College.

**Methods:** Among students of first year BDS, the Dundee Ready Education Environment Measure (DREEM) Questionnaire was used to assess the learning environment as perceived by students. The English version of the DREEM inventory was administered to all the students. The participation was voluntary and the questionnaire was anonymous. The return of the completed questionnaire was taken as their implied consent.

**Results:** The overall DREEM score was 125 (out of 200). The perception of the students to the learning environment was found to be positive. The general atmosphere of college was found to be comfortable. The study also highlighted the areas that need improvement in the dental college.

**Conclusions:** The study showed a positive learning environment at the college. The students experienced educational stresses but their social life on the campus was quite satisfactory.

**Keywords:** Environment, Perception, Dental student, DREEM

## BDS PROGRAM AS A CAREER OPTION FOR CHILDREN – PARENTAL PERCEPTIONS

Shazia Nawabi

Rawal Institute of Health Sciences, Islamabad

**Objectives:** To identify the perceptions of parents about BDS program as a career choice for their children.

**Methods:** This was a qualitative study. Purposive sampling was done by using list of registered candidates appearing in entry test (NTS) examination in Rawal Institute of Health Sciences Islamabad (RIHS) in session 2014-2019. Their parents were invited for focus group discussions (FGDs) in 3 to 4 groups (n= 10). After verbal consent, researcher herself and two assistant moderators conducted semi-structured FGDs accompanied with audio recording were done. Notes and memos were maintained.

**Results:** Descriptive analysis was done by NVIVO v.10 SP 4 without losing its richness. Analysis was done by making nodes. Open coding was done for identification of themes. Axial coding, selective coding and coding comparison queries were used for interlinking of different themes. Flow charts, tables, graphs and tree maps were also used.

**Conclusions:** Most of the parents perceived BDS as second option in case their children didn't get admission in MBBS.

**Keywords:** Perceptions: Identification, sensory information

## BODY MASS INDEX, DIET AND PHYSICAL ACTIVITY – STUDY ON MEDICAL STUDENTS OF LAHORE

Anam Rashid

FMH College of Medicine and Dentistry, Lahore

**Purpose:** This study aims to calculate body mass index of pre-clinical medical students in coherence with their perception about the diet they consumed, their weight and their exercising habits.

**Methods:** This was a cross sectional survey carried in 4 medical colleges of Lahore during May 2014. A questionnaire along with calculation of the body mass index was done on 200 pre-clinical medical students. They were assessed on BMI, perception about their health condition, their eating habits and physical activities.

**Results:** sample size was 200. 54% (108) medical students were in normal body mass index range. 19% (38) were underweight, 22.5% (45) were overweight and 4.5% (9) were obese. Majority, 141 (70.5%) students were diet conscious. 149 (74.5%) were not having physical activities after joining medical college.

**Conclusions:** Most of the students were not in a healthy range of BMI although perceived falsely that they are healthy. But most of the students were diet conscious. Most of the medical students had an idea that practicing religion is the best way to stay mentally healthy and majority had no exercise or sports in their daily routine.

**Keywords:** Medical Education, Students, BMI

## OCCURRENCE OF ANXIETY AND DEPRESSION IN MEDICAL AND NON-MEDICAL STUDENTS OF LAHORE: A CROSS-SECTIONAL STUDY

Ahsan Zil-E-Ali

FMH College of Medicine and Dentistry, Lahore

**Purpose:** Students are under constant personal and academic stress predisposing them to develop anxiety and depression. The present study aims to determine the prevalence of anxiety and depression among medical and non-medical students of Pakistan.

**Methods:** A cross-sectional study was carried out. 400 students were included in the study, 200 medical and 200 non-medical students. Beck's anxiety and depression inventories were used to assess the students with 13 to 17 years of education.

**Results:** The result analysis showed that more non-medical students were in moderate 24% (48) and high anxiety 7.5% (15) class as compared to medical students with 13.5% (27) in moderate and 2% (4) in high anxiety class. Depression analysis also showed more non-medical students were in moderate 34.5% (69) and severe 10% (20) depression category as compared to medical students with 9% (18) in moderate and 3% (6) with severe depression. Females were found to be more affected with moderate anxiety 11.25% (45) than males 7.5% (30)

**Conclusions:** The prevalence of anxiety and depression is greater in non-medical students. These illnesses have higher prevalence amongst the female gender. The risk factors need to be investigated further in these populations and a management plan should be proposed accordingly.

**Keywords:** Medical Student, Anxiety, Depression, Psychiatry

## FACTORS ASSOCIATED WITH BURN OUT IN MENTAL HEALTH WORKERS

Afsheen Masood, Jaleesha Butt

Institute of Applied Psychology, university of the Punjab, Lahore

**Purpose:** The major goal of this research is to determine the various risk factors associated with burn out of mental health professionals. The phenomenon of burn out has scarcely been explored with reference to mental health professionals.

**Methods:** The sample for this research comprised of Psychiatrists and psychologists working in public and private sectors. Cross sectional research design was used. The age of the participants ranged between 30 to 45 years. The minimal time period for work in mental health settings for the participants was stipulated to be at least 5 years or so. In addition to detailed demographic sheet, an indigenously constructed scale comprising of three domains that could possibly cause burnout was administered. Inferential and descriptive analyses were undertaken through SPSS version 21.00.

**Results:** The findings indicate that personal characteristics were most significantly related factors that caused burn out. Second to that was domain of the work characteristics that served as leading source of burn out and least burn out was caused by the clients' characteristics.

**Conclusions:** Personal characteristics and nature of work play an important role to cause burn out in mental health workers.

**Keywords:** Burn Out, Mental Health Workers, Factors of Burn Out

## QUALITY ASSURANCE IN MEDICAL EDUCATION IN PAKISTAN – A REVIEW

Muhammad Usman Anjum

Frontier Medical & Dental College, Abbottabad

**Purpose:** To assess the level of quality assurance in medical education in Pakistan.

**Methods:** An internet search was carried out. Published research (in Pakistan and sub-continent) and documents pertaining to policy were reviewed.

**Results:** Number of medical colleges has increased to about 92 in Pakistan. Compelling evidence regarding quality assurance in Pakistan was not available. Data from India and Iran also revealed that there is a rapid increase in medical educational institutes. This requires stringent quality assurance measures to be enforced in order to improve the quality of medical education.

**Conclusions:** Quality assurance plays a pivotal role in medical health education. There is a need to establish stringent policy guidelines for accreditation standards. This will help improve level of medical education in Pakistan. It will also ensure that medical graduates will receive good education and public will get highest standards of healthcare services from well-educated doctors.

**Keywords:** Medical Education, Quality Assurance, Pakistan

## TO ASSESS THE STUDENT SATISFACTION ABOUT GROUP TEACHING METHODOLOGY

Nadia Tariq

Islamabad Medical & Dental College, Islamabad

**Purpose:** To assess the student satisfaction about group teaching methodology.

**Methods:** This was a cross-sectional study. Study tool was self developed questionnaire. A total of 90 students were included in the study to access their satisfaction about small group teaching methodology.

**Results:** According to this study, 98.8 % students were of the opinion that group teaching methodology was more productive as compare to conventional teaching method and 100% students recommended this method for their juniors. When asked about suggestions for improvement of batch coordination 36.6% (n=33) were of the opinion that that batch coordination can be improved through more frequent class tests. 20% (n=18) said that no further improvement was required. 13.3% (n=12) said that the feedback by coordinator should have weightage in internal assessment. 11.1% (n=10) didn't give any suggestions. 5.5% (n=5) suggested that there should be timely notification for all activities. 3.3% (n=3) said that the number of students in a group should be small.

**Conclusions:** Small group interactive teaching sessions are more affective and productive for the students.

**Keywords:** Medical Students, Satisfaction, Teaching Methods, Interactive

## IMPORTANCE OF ESTIMATION OF FOLLICULAR OUTPUT RATE

Rehana Rehman

Aga Khan University, Karachi

**Purpose:** To estimate pregnancy outcome after ICSI in terms of oocyte parameters, embryo quality, endometrial thickness, hormone and cytokine levels in women stratified on the basis of follicular output rate (FORT).

**Methods:** Quasi experimental design recruited one thousand and fifty females with age between 21- 40 years, infertility more than 2 years, body mass index of 18–35 kg/m<sup>2</sup>, menstrual cycle of 25 ± 7 days, serum FSH levels less than 8 IU/ml. Females on short agonist or antagonist protocol with diagnosis of polycystic ovarian syndrome, fibroids or in their male partner sperms retrieved by testicular biopsy were excluded from the study. Down regulation of ovaries was followed by controlled ovarian stimulation, ovulation induction (OI), oocyte pick up, in vitro fertilization, embryo transfer (ET) and confirmation of pregnancy was done by serum beta hCG of more than 25mIU/ml and cardiac activity on trans vaginal scan. FORT (ratio of pre-ovulatory follicle count to antral follicle count × 100 on OI day) stratified females into low under the 33rd percentile, medium between the 33rd and the 67th percentile and high above the 67th percentile. Characteristics of groups were compared by one way analysis of variance.

**Results:** Females 276(33%), 288 (34%) and 282 (33%) comprised of low, medium and high FORT groups respectively. The number of retrieved, mature and fertilized oocytes, cleaved embryos, endometrial thickness and number of gestational sacs was observed in high FORT in comparison with medium FORT with resultant greater number of clinical pregnancies 183(65%).

**Conclusion:** The FORT in non PCOS patients may reflect good reproductive outcome after ICSI with maximum clinical pregnancies in high FORT group.

**Keywords:** Intracytoplasmic, FORT, Antral follicle count

## EVALUATION OF THE LEARNING ENVIRONMENT OF TEACHING HOSPITALS OF TWIN CITIES IN PAKISTAN

Huma Zeb

Quaid e Azam International Hospital, Islamabad

**Purpose:** To measure and compare the postgraduate learning environment of house officers and residents working in teaching hospitals of twin cities in Pakistan.

**Methods:** It was a Cross sectional survey done at 6 public and 1 private postgraduate teaching hospitals from September to October 2013. Sample size was 300 and 286 (95.33%) were house officers and residents. Postgraduate Hospital educational Environment Measure (PHEEM) was used to evaluate the learning environment. The statistical analysis was done by SPSS v 16.0 using Student t- tests and the four negative items were scored in reverse. The scores (total & sub-scales) and comparison of the of the educational environments perception were expressed as a mean and  $\pm$  SD. P-value  $\leq$  0.05 was considered significant.

**Results:** The PHEEM questionnaire was filled by the two groups i.e 51% house officers & 49 % residents, age and sex matched (52% male & 48% female). Respondents were from medicine (44.8%), surgery (33.6%), Obs/Gynae (11.2%) and Paediatrics (10.50%). The results showed good internal reliability (0.92 Cronbach's Alpha value). Learning environment was a good with no difference in the learning perception among two groups

**Conclusions:** The study provided a holistic, comprehensive, systemic and detailed picture of the learning environment by pointing out short comings as well as strong points. It showed that PHEEM can be used in future as quick, easy and cost effective way of measuring and comparing learning environments.

**Keywords:** PHEEM, Learning Environment, Scores

## DEVELOPMENT, VALIDITY AND RELIABILITY OF THE URDU VERSION OF WHO-QOL-BREF AMONG PAKISTANI POPULATION

Haider Ghazanfar

Shifa International Hospital, Islamabad

**Purpose:** Quality of life is defined by WHO as "individuals' perceptions of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectation, standards and concerns". WHO-QOL-BREF questionnaire was constructed and cross-culturally validated in order to standardize evaluation of quality of life. The purpose of the research is to generate and to validate an Urdu version of WHO-QOL-BREF. Urdu translation can make more accurate interpretation of the data.

**Methods:** A 4 stage process comprising of translation, back translation, formation of pre final version, face validity was used in the translation of the English version of WHO-QOL BREF into an Urdu version of WHO-QOL BREF. People fluent in both English and Urdu were included in the study. Participants were selected via consecutive non-probability sampling. Half the participants completed the English Version of WHOQOL-BREF first and then the Urdu version of WHOQOL-BREF, while the other half did this in reverse order.

**Results:** The questionnaire was completed by 450 participants of which 58.6% were female and 41.1% were males. All the domains showed adequate linguistic equivalence, conceptual equivalence, internal consistency and construct validity, showing p-value  $<$ 0.05.

**Conclusion:** The new Urdu version of WHOQOL-BREF questionnaire is an acceptable questionnaire and can be used in studies in Pakistan.

**Keywords:** Pakistan, Quality of life, WHOQOL-BREF, Translation, Validation studies



## ANTHROPOMETRIC INDICES OF OBESITY, BLOOD CELL COUNT AND ARTERIAL STIFFNESS INDEX IN PRE-HYPERTENSIVE AND HYPERTENSIVE MALES

Muhammad Sajid Mehmood

Poonch Medical College, Rawalakot, AJK

**Purpose :** The simplest markers like arterial stiffness index, anthropometric measurements and blood cell count may show a correlation with the pathophysiology of hypertension.

**Methods:** Thirty (30) male subjects aged 35-55 years were selected in each of normotensive, pre-hypertensive and hypertensive groups. Their weight, height, waist circumference (WC) and hip circumference (HC) were measured according to the WHO guidelines. BMI, waist hip ratio (WHR), waist stature ratio (WSR) and conicity index (CI) were calculated. ASI was calculated from digital volume pulse recorded by photoplethysmography with iWorx-214 physiological interface system. The white blood cell count and differential count was done. One way ANOVA followed by Post Hoc Tukey's Test was applied to determine the statistical difference between the groups. Pearson's coefficient was calculated to study the correlation. Statistically, p value < 0.05 was considered significant.

**Results:** statistically significant difference was found in WHR (0.000), WC (0.003) and ASI (0.000) between the study groups but not BMI (0.223). Amongst the anthropometric measurements, WHR and WC had positive correlation with the systolic and diastolic blood pressure. The WBC and absolute neutrophil count correlated significantly with WHR and WC but not with ASI and blood pressure.

**Conclusions:** Arterial stiffness index is associated with blood pressure and helpful in monitoring the effect of various therapeutic approaches on reducing the arterial stiffness and hence cardiovascular complications. The central obesity is a risk factor for arterial stiffness and hypertension than BMI in men.

**Keywords:** Pre-hypertension, Hypertension, Central Obesity, Photoplethysmography

## HEPATITIS B VACCINATION STATUS OF NURSING AIDS OF SULTANA FOUNDATION FREE CLINIC FRASH TOWN, ISLAMABAD, PAKISTAN

Uzma Shaheen, Zartasha Riasat, Sumera Nawaz, Muhammad Ismail, Sameual Salman, Nasira Joseph

Isra College of Nursing, Islamabad

**Background:** Hepatitis B virus (HBV) infection is a global public health challenge. The prevalence of hepatitis B virus is 2.8% in Pakistan. The risk of getting HBV infection by Health Care Workers is four fold higher as compared to general adult population.

**Purpose:** The purpose of this project was to determine the knowledge of hepatitis B infection, spread, preventive strategies and vaccination status among nursing aids of sultana foundation free clinic Islamabad.

**Methods:** Data was obtained using structured questionnaire from 19th February 2014 to twenty April 2014. A Questionnaire includes queries about hepatitis B spread, preventive strategies and vaccination status was used. Twenty seven nurses participated in this study. Data was analyzed using SPSS 20.0 statistical software.

**Results:** Mean age of participants was 15±1.9 years. The data showed 11.11% participant had knowledge about hepatitis B vaccination, 3.7% had a single dose of vaccination eight months earlier, 88.8% had no idea about hepatitis B vaccination and 100% participant had no idea about the spread of hepatitis B and its prevention.

A teaching session on hepatitis B prevention, spread, preventive strategies and importance of vaccination status was conducted by the collaborative efforts by Sultana Foundation management and AMSON pharmaceuticals. First dose of vaccine was also administered by nursing students of ISRA College of Nursing.

**Conclusion:** Adequate knowledge about hepatitis B, its spread and preventive measures can reduce the risk of hepatitis B infection. Vaccination can help to decrease the burden of hepatitis B among health care professional. Periodical educational session reinforce infection control practices in nursing aids.

**Keywords:** Hepatitis B, Nurse aids, Teaching strategies

## USE OF MULTIPLE TEACHING LEARNING STRATEGIES AND LIFELONG LEARNING

Khairunnissa Sadruddin Uttanwalla

Isra College of Nursing, Islamabad

**Background:** Diverse roles of nurse's demands higher level of critical thinking and clinical judgment skill. Nurse educators are required to create learning environments that support critical thinking. There is a lack of evidence of consistent teaching methods among nurse educators.

**Purpose:** This study was conducted to determine the use of various teaching learning strategies by nurse educators at ISRA college of Nursing Islamabad in Teaching Learning course.

**Methodology:** A structure questionnaire was administered to 36 students. A total of eight strategies (case scenario, cooperative teaching, reflective practice, simulated teaching, group teaching, interactive lecture, power point presentation and teaching administration in community) were used by educators and students rated the effectiveness of those strategies. Data was analyzed using SPSS version 20.

**Result:** Twenty eight (77.8%) student find the case scenario as the most effective strategy, seventeen (47.2%) said reflective practice is highly effective, sixteen (44.4%) find group teaching as effective, seventeen (47.2%) find community project as effective. The least like strategy was cooperative teaching and only four (11.1%) thought it was very effective. A variety of reasons were given, but the most frequently cited reasons from the faculty for being most effective were promotion of active learning and critical thinking. Other reasons included enhancement and reinforcement of learning, promotion of teamwork, facilitation of problem solving, interaction with peers, incorporation of all learning styles, and preparation for exams.

**Conclusion:** Use of multiple teaching learning strategies can equip the nursing students to become competent professionals. Incorporating case based learning, simulation strategies, and actual teaching projects can enhance learning by fourfold.

**Keywords:** Teaching learning, Nursing students, Teaching strategies

## KNOWLEDGE AND PRACTICES OF SELF-BREAST EXAMINATION IN HIGH SCHOOLGIRLS OF SULTANA FOUNDATION ISLAMABAD PAKISTAN

Sabiha Sarwar, Shagufta Siddique, Rubina Nathaniel, Shahida Shre Ahmed, Nazia Abbas

Isra College of Nursing, Islamabad

**Background:** Breast cancer poses a serious health risk for women throughout the world. Pakistan has the highest rate of breast cancer in Asia.

**Purpose:** Purpose of this study was to identify the knowledge and practices of self-breast examination in girls of Sultana Foundation high school.

**Methodology:** Interview based structured Questionnaire was used to collect the data from 1st December 2014 to 31st January 2015 from 213 girls. Questions about knowledge (appropriate timing and techniques) and Practice of Self Breast Examination (frequency of exam) were recorded. Data was entered and analyzed in SPSS version 21.

**Result:** Mean age and standard deviation of student were 15.4±1.0 years. Total participant of the study were 147 and none of them have any knowledge about self breast examination (SBE). Before educational session knowledge about SBE was 1%. Only Thirteen (8.8%) know about the age by which female should start peruming (SBE). Methods and timings were unknown by all participants. All the participants were also unaware about the normal and abnormal changes during menstrual cycle in breast. After intervention knowledge about SBE increased by 96%.

Knowledge about self-breast examination was assessed by pre session Questionnaire. Educational session about importance and practice of SBE was given through charts, Demonstration and Discussion. At the end, evaluation was done by post session Questionnaire and Re-demonstration.

**Conclusion:** Educational sessions about the importance of SBE can enhance the knowledge among young girls, eventually helping in early detection of breast cancer. Knowledge of Sultana Foundation girls about SBE was increased after health education session.

**Keywords:** Breast Examination, Breast Cancer.

## DENTAL CARIES AMONG SCHOOL AGE CHILDREN OF SULTANA FOUNDATION ISLAMABAD

Mujahid Ali, Asif Waseem, Aneel Albert, Imran Ali Shah, Imran Parvez, Muhammad Ismail

Isra College of Nursing, Islamabad

**Background:** Dental caries is the most common chronic infectious disease of childhood caused by the interaction of bacteria, mainly *Streptococcus mutans* and sugary foods on tooth enamel. Identification of dental caries at earlier stages can prevent complication.

**Purpose:** To identify the prevalence of dental caries in school going children at Sultana foundation boy's high school Islamabad and conduct a health education program based on study findings.

**Methodology:** A cross-sectional descriptive study was conducted on school going children by using screening questionnaire regarding dental carries at Sultana foundation boy's high school in Frash town Islamabad. Data was collected from Dec 1, 2014 to Jan1,2015 regarding the age and presence of dental caries in children age limit from 9-15 years. Data analysis was done using SPSS 21 version.

**Results:** Total participants of study were 154 students. Mean age of participants was  $11.79 \pm 1.16$ . Dental caries was found in 44(28.57%) students. 62 participants were from 5th class and the prevalence of dental caries was 16(10.38%), 74 participants were from 6th class and dental caries was 21(13.64%) and 18 participants from 7th class have the prevalence of 7(4.55%).

A health education program was conducted on Feb3, 2015 at Sultana foundation boys high school Frash Town Islamabad using audio visual aids and demonstration strategies. Evaluation of demonstration was also done by participants.

**Conclusion:** Early detection of dental caries can prevent from complications. Health teaching regarding dental caries in school going children has a positive effect in the betterment of health of children.

**Keywords:** Dental caries, School going children, Prevalence

## ASSESSMENT OF NUTRITIONAL STATUS OF SCHOOL GOING CHILDREN OF SULTANA FOUNDATION FRASH TOWN PAKISTAN

Nadia Noreen, Zoya Sushma, Uzma Shaheen, Bibi Rehman, Shahri Shan

Isra College of Nursing, Islamabad

**Background:** Malnutrition is a pathological condition caused by the deficiency of one or more nutrients. Children are the worst affected group. Fifty four percent deaths are occurring in developing countries because of Malnourishment.

**Purpose:** This project was aimed to assess the nutritional status of school going boys and girls of Sultana Foundation and subsequently plan interventions to address the needs of malnourished cases.

**Method:** A structured questionnaire was used to collect the data from December 1st 2014 to January 31st 2015. A total of 367 students were screened for nutritional abnormalities. Questionnaire includes questions regarding age, gender, height, weight, hip and waist circumferences of participants. World health organization (WHO) 2007 criteria for classifying the participants into normal and malnourished children (sever thinness, thinness, over weight and obese) was used. All the data was entered and analyzed in SPSS version 20.

**Result:** Mean age and standard deviation of the participants was  $13.56 \pm 1.9$  years. Out of 367, one fifty four (42%) were male and two hundred thirteen were (58%) female. The overall malnourished children were 52 (14.2%) and 315(85.8%) normal. Out of 52 malnourished children 34 were male and 18 were female. Severely thin children were 17(4.6%), thin 35(9.5%), normal weight 276 (75.2%), overweight 20(5.5%) and obese 19(5.2%).

**Conclusion:** The overall prevalence of malnourishment is greater in male school going children as compared to females. Periodic screening of school going children for malnourishment can help in prevention of serious complications resulting in better student learning outcomes.

**Keywords:** Malnutrition, Screening, School going children.

## PERCEPTION OF NURSING STUDENTS ABOUT EDUCATIONAL ENVIRONMENT IN ISRA COLLEGE OF NURSING

Shahzad Inayat

Isra College of Nursing, Islamabad

**Background:** Quality of education plays important role in students learning. Conducive educational environment is prerequisite for lifelong learning and better outcome. Periodic feedback by students about their educational environment can help educator to identify and address learning needs in all areas of education.

**Purpose:** This study was set out to determine the views of nursing students about their educational environment and consequently strategies will be adapted to further improve and produce better learning outcomes among students.

**Methodology:** A cross sectional study was conducted between November to December 2014. Data was collected using Dundy Ready Educational Environment Inventory. Total score is 200 subdivided into five domains, students perception of learning (48), perception about teachers (44), academic self perception (32), perception of atmosphere (48), social self perception (28). The scores were interpreted as 0-50 Very Poor, 51-100 Increased No. of Problems, 101-150 Mostly Positive than Negative, and 151-200 Excellent. Data analyzed using SPSS 20.

**Results:** Mean age and standard deviation of participants was  $28.5 \pm 4.7$  years respectively. Total participants were 50, thirteen males (26%) and thirty seven (74%) were females. The overall mean score was  $135.9 \pm 18.5$  which was considered more positive than negative. Two sample t- test showed no statistically significant difference between the mean scores of two classes, p value (0.013).

**Conclusion:** The educational environment of ICN is generally perceived positive by nursing students; however some specific areas need improvement. The educators need to make special efforts to create appropriate educational environment in order to provide and maintain the highest quality of education.

**Keywords:** Educational Environment, Nursing Education, DREEM.

## SIGNIFICANCE OF SCHOOL NURSE IN HEALTH SCREENING OF SCHOOL CHILDREN

Zartasha Riasat, Mehr-un-Nisa, Sonia Kiran, Misbah Rasool, Umm-e-Rubbab

Isra College of Nursing, Islamabad

**Background:** Health screening program include taking personal question and family health history and performing a physical examination. The school nurse has a crucial role in provision of comprehensive health services to children.

**Purpose:** The purpose of this project was to screen the school going children of Sultana Foundation for prevalent school health problem and to conduct school health session based on screening findings.

**Methodology:** Study was conducted at Sultana Foundation girl's high school and boy's elementary school. The age ranged from 10-14 years(boys) and 12-17 years (girls) were screened using a through history questions and comprehensive head to toe physical assessment. Data was analyzed in SPSS version 21.

**Results:** Mean age of participant was  $13.56 \pm 1.9$  years. A total of 367 students were screened, 154 were male and were 213 females. Fifty two (14.2%) were malnourished, seventy five (20.4%) have dental carries, one hundred and six (28.6%) were having grade I-II tonsils. Eight (2.2%) having diarrhea, seventeen (4.4%) were constipated for last five days. Eight (2.2%) have vision problems, four (1.1%) were having deviated nasal septum and Eight (2.2%) have earache.

Following school health screening, health care needs identified and prioritized such as malnutrition, dental carries, nasal, ear and eye problems and lack of knowledge about self-breast examination in female students. Health teaching and awareness programs were conducted. Referral services were given to the children having serious health issues.

**Conclusion:** School nurses can play a pivotal role in the detection of prevalent school health problems including dental carries, malnourishment and other physical ailments.

**Keywords:** Screening, School health, School Nurse.

## COMPETENCY ASSESSMENT OF ONCOLOGY NURSES IN CHEMOTHERAPY ADMINISTRATION AT THE ARMY HOSPITAL RAWALPINDI, PAKISTAN: AN INTERVENTIONAL STUDY

Najma Khan

School of Nursing Aga Khan University

**Background:** It is important that nurses should be competent to provide specialized care to cancer patients and their competencies should be assessed at regular basis.

**Objective:** To explore the levels of clinical competence to identify the existing knowledge, skills, and attitude of oncology nurses' and to describe their perceptions about obstacles to oncology education regarding chemotherapy administration and management.

**Methodology:** This research study was conducted at two units (AFBMT and CMH) of Army Hospital Rawalpindi, on practicing oncology nurses. A pre-post -test- intervention study design was used. A sample of 35 nurses was involved in the study. The participants' s knowledge, attitude, and obstacles' to oncology education were assessed through Verity's tool consisting of multiple choice questions (MCQs) and two open ended questions while the skills of the participants were observed through Silva's checklist.

**Results:** Difference in knowledge was analyzed through repeated measure of ANOVA. The mean scores of knowledge, skills and attitude were calculated by Cochran's Q test. The result showed the knowledge and skills scores of the participants increased significantly after the educational intervention in post-test one and two. The difference in the attitude of the nurses was not found to be statistically significant in ANOVA. Moreover, the participants identified many barriers to acquiring chemotherapy education in Army Nursing, and its standardization across the state.

**Conclusion:** The results will provide bases for the interventions targeting nurses by providing them opportunities of continuing professional educations regarding chemotherapy administration. The policies regarding nurses' higher education and posting of specialized nurses should be revised in Army Nursing.

**Keywords:** Oncology nurse knowledge, chemotherapy administration, educational intervention.

## MICROBIOLOGICAL CONTAMINATION IN WATER FILTRATION PLANTS IN ISLAMABAD

Aliya Hisam

Army Medical College, NUST, Rawalpindi

**Background:** Water pollution is one of the major threats to public health in Pakistan regarding drinking water quality. Microbial and chemical pollutants exclusively or in combination produce various public health problems.

**Purpose:** To determine the frequency of microbiological contamination in different water filtration plants in Islamabad.

**Methods:** A Descriptive cross-sectional study carried from to September 2012. Water Filtration Plants (WFP) of Islamabad were included in the study. Water samples were collected according to the standard water sampling protocol and transported to Pakistan Council for Research in Water Resources (PCRWR) for analysis. Microbiological quality of water was determined as total coliforms (< 2.0 MPN/100 ml) and Escherichia coli (< 2.0 MPN/100 ml). Microbiological contaminated water was defined the sample which had more than 2.0 MPN per 100 ml of either total coliforms or Escherichia (E.) Coli.

**Results:** Thirty two WFP were analyzed for microbiological contamination. E. coli was present in 8 (25.0%) while 24 (75.0%) water samples were free from it. Total coliforms were present in 13 (40.6%), while 19 (59.3%) samples were free from it. Faecal coliforms were present in 8 (25.0%) and absent in 24 (75.0%) samples. Both E. coli and total coliform were present in 8 (25.0%) samples. Nine (59.3) WFP were free from E. coli, total coliform and faecal coliform.

**Conclusion:** water plants in certain sectors showed more frequent contamination than others.

**Keywords:** contamination, filtration plants, coliform, E coli.

## RELIABILITY AND VALIDITY OF A TOOL TO ASSESS AIRWAY MANAGEMENT SKILLS IN ANAESTHESIA TRAINEES

Aliya Ahmed

Aga Khan University, Karachi

**Background:** Gaining expertise in procedural skills is essential for achieving clinical competence during anaesthesia training under supervision to ensure patient safety. This requires reliable assessment techniques like bag-mask ventilation and tracheal intubation to save lives during cardiorespiratory arrest.

**Purpose:** to evaluate the construct validity, and inter-rater and test-retest reliability of a tool designed to assess competence in bag-mask ventilation and tracheal intubation in anaesthesia trainees.

**Methods:** Informed consent was obtained from all participants. Tracheal intubation and bag-mask ventilation skills in ten junior and ten senior anaesthesia trainees were assessed by two investigators on two occasions at a 3-4 week interval, using a procedure-specific assessment tool, while the trainees worked in their assigned operating rooms with the assigned consultants.

**Results:** Average kappa value for inter-rater reliability was 0.91 and 0.99 for the first and second assessments respectively, with average agreement of 95%. The average agreement for test-retest reliability was 82% with kappa value of 0.39. Senior trainees obtained higher scores compared to junior trainees in all areas of assessment, with significant difference for patient positioning, pre-oxygenation and laryngoscopy technique, depicting good construct validity.

**Conclusions:** The tool designed to assess bag-mask ventilation and tracheal intubation skills in anaesthesia trainees demonstrated excellent inter-rater reliability, fair test-retest reliability and good construct-validity. The authors recommend its use for formative and summative assessment of junior anaesthesia trainees.

**Keywords:** Airway management, tracheal intubation, clinical competence

## PREVALENCE OF DEPRESSION, ANXIETY AND STRESS AMONG MEDICAL STUDENTS

Farwa Rizvi

Islamabad Medical and Dental College, Bahria University, Islamabad

**Purpose:** To determine the prevalence of depression, anxiety and stress among medical students in private and public medical universities in Islamabad

**Methods:** Study was basically Cross-sectional survey, carried from August to November 2014. Depression, Anxiety, and Stress Scale (DASS) was used in age and sex matched students. Data regarding marks obtained as mean % scoring in the professional examinations was collected. Statistical tests including Anova were applied to determine p values. Results: Following the ethical approval, 66 medical students from first year to final year were selected (purposive sampling) after informed written consent. The prevalence of depression was 40.9% (9.09% mildly, 16.67% moderately, 13.64% severely depressed and 1.52% extremely severely depressed). Depression had no significant role on the overall students mean % scoring of 1st, 2nd & 3rd Professional examination. The prevalence of anxiety was 74.2% (13.64% mild, 27.27% moderate, 19.70% severe and 13.64% suffering from extremely severe anxiety). Anxiety had a significant role on the overall mean % scoring of students of 1st and 3rd Professional examination.

**Conclusions:** There is a high prevalence of depression followed by anxiety and stress in medical students during their academic training.

**Keywords:** medical students, anxiety, academic training

## METHOD OF LOCI (MOL) AS A MNEMONIC DEVICE IN LEARNING ENDOCRINOLOGY

Ayisha Qureshi

Rawal Institute of Health Sciences, Islamabad

**Background:** the way knowledge is structured in memory determines the ability to retain, recall, and use it to solve problems. The method of loci (MOL) is a mnemonic device that relies on spatial relationships between “loci” (e.g. locations on a familiar route or rooms in a familiar building) to arrange and recollect memorial content.

**Purpose:** The method of loci as a mnemonic device to facilitate learning in endocrinology can lead to improvement in student performance.

**Methods:** This study was conducted with a class of 78 second-year medical students, divided into two groups: group 1 was taught insulin and diabetes mellitus through didactic lectures and a SDL (n=50) whereas group 2 (n=28) was taught insulin and diabetes mellitus through didactic lectures and MOL followed by a single uniform assessment (quiz), composed of multiple choice questions (MCQs). A questionnaire was distributed to the participants of the study (n =28) during the last session. The MOL scale consisted of nine items regarding the effectiveness of MOL in physiology and other subjects and peer teaching. Each item was accompanied by a five-point likert scale.

**Results:** An independent student's t-test showed the dependence between MOL and student performance as measured by assessments. Highly significant increase ( $p = 0.003$ ) in the number of correct responses on the questions by students of group 2 (mean: 9.31, SD: 1.12) compared with students of group1 (mean: 8.10, SD: 1.85). Most of the respondents (92.9%) were able to recall facts better after learning them with MOL. 85.7% students agreed that it helped them understand the topic better, whereas 14.3% were neutral. The majority of the participants (89.3%) agreed to “continue using MOL to learn more topics in physiology”.

**Conclusion:** MOL can be used as a helpful teaching and learning technique.

**Keywords:** method-of-loci, memory palace, assessments, likert scale

## ASSOCIATION OF EGO DEFENSE MECHANISMS WITH ACADEMIC PERFORMANCE, ANXIETY AND DEPRESSION IN MEDICAL STUDENTS

Ahmed Waqas

CMH Lahore Medical College & Institute of Dentistry, Lahore

**Purpose:** to analyze association of ego defense mechanisms, anxiety and depression with academic performance of medical students.

**Methods:** A cross sectional study, carried at CMH Lahore Medical College, Lahore from 1st Dec, 2014 to 15th Jan, 2015. Convenience sampling technique was employed. Sample size was 350 (age and sex matched). A questionnaire consisted of three sections: (1) Demographic form documenting demographics & academic scores of medical students in their last exams (2) Hospital Anxiety & depression scale (HADS) which assesses levels of anxiety and depression in respondents and (3) Defense style questionnaire (DSQ 40). Data were analyzed in SPSS v. 20. Mean scores and frequencies were calculated for demographic variables and simple linear regression was employed to assess associations between academic scores, demographics, ego defense mechanisms, anxiety and depression. P value less than 0.05 was considered statistically significant.

**Results:** Most of the students belonged to 2nd year MBBS (88, 24.14%). Mean scores percentage in last examinations of medical students was 65%. Simple linear regression revealed a significant association between academic scores and Ego defense mechanisms, anxiety and depression levels. Academic scores decreased with increasing levels of immature defense mechanism ( $P < 0.05$ ), anxiety ( $P < 0.05$ ) and depression scores ( $P < 0.05$ ). There was a positive association between mature defense mechanisms and increasing academic scores ( $P < 0.05$ ).

**Conclusions:** There is a significant association between academic performance and ego defense mechanisms, anxiety and depression levels in medical students.

**Keywords:** Medical Students, Ego Defense, Anxiety, Depression

## MATERNAL HEALTH STATUS IN A PERI-URBAN SETTING OF ISLAMABAD - A COMMUNITY BASED SURVEY

Sajida Naseem

Shifa College of Medicine, Shifa Tameer-e-Millat University, Islamabad

**Purpose:** to determine the maternal health status in terms of antenatal, natal and postnatal care at Nurpur Shahan, Islamabad.

**Methods:** Married women were selected through consecutive non-probability sampling and were interviewed by 4th year medical students through a structured questionnaire in urdu language under the supervision of principal investigators. SPSS version 21 was used to analyze the data.

**Results:** Mean age of respondents was  $31.41 \pm 8.25$  years, Age at marriage was  $19.08 \pm 3.6$  years, Age at first child was  $20.62 \pm 4.16$  years, No of live children per couple was  $3.12 \pm 1.8$ , No of additional children a couple would like to have  $0.69 \pm 1.039$ . Antenatal visits  $4.53 \pm 3.937$  per pregnancy. Most (64.9%) families were living in a nuclear set up, 43.2% women were illiterate, 72.2% took prenatal care, out of these 53.2% attended tertiary care hospital for antenatal care, 62.8% women received TT Injection, 41.5% delivered at hospital, 28.8% received postpartum check up at hospital.

**Conclusions:** We conclude that the maternal health status at Nurpur Shahan is in line with the National indicators as per PDHS 2012-13, despite of its close proximity to the tertiary care hospitals which opens new avenues for discussion.

**Keywords:** Maternal Mortality Rate, Maternal Health Status, Antenatal Visits

## IT SHOULDN'T HURT TO BE A CHILD: A CASE REPORT

Maryam Pyar Ali Lakhdar

Aga Khan University, Karachi

**Purpose:** To review the case with relevant literature on the physical, psychological abuse and neglect on children and adolescents.

**Methods:** Case report review, labeled as abuse on the basis of International Child Abuse Screening tool for Parent and child developed by International Society of Prevention of Child Abuse and Neglect. This is the sub study of representative cross sectional study based on 32 random clusters of Karachi. The study population was 11 to 17 years old children and their parents living at home in selected areas. Multistage cluster sampling technique was used with sample size of 800 households (9800 parents and 800 children).

**Results:** In the present case report, a 15-year-old girl was physically and psychologically abused by her family who caused actual bodily and emotional trauma to the girl like thrown into water tank, kicked, slapped, got hit from hard objects including shoes, belt, hanger, get burned from candles and hot spoon inside mouth, restrained from rope, insulted by bad names as a disciplinary strategy adopted by family. After adequately dealing the emotional effects of child via additional counseling on proper parenting techniques, the child was feeling better. In addition, parent and child were referred to Abbasi Shaheed hospital for psychological counseling. Moreover, Toll-free number was given to child for contacting SAHIL NGO for individual counseling.

**Conclusions:** There should be an awareness raising program for adopting a positive parenting style rather than using corporal and extreme punishment as a disciplinary strategy.

**Keywords:** Child, Punishment, Abuse, Discipline, Parent



## CLINICAL TEACHERS AS ROLE MODELS: PERCEPTIONS OF UNDERGRADUATE MEDICAL STUDENTS

Sonia Ijaz Haider

Shalamar Medical and Dental College, Lahore

**Purpose:** to explore and identify characteristics which medical students indicate as important in role models

**Methods:** A questionnaire was distributed among final year students (n=93) in October 2014. Students were asked to rate the qualities which they consider as important in their medical teachers as role models. Respondents ranked each statement in importance using a three point Likert scale. An open ended text box was also included for respondents to list the least desirable characteristics.

**Results:** Completed questionnaires were received from 79 students (84.94%). Four attributes were identified as most important: demonstrating clinical competence, having an encouraging and supportive attitude, providing feedback to improve learning and exhibiting appropriate professional behaviour. Respondents also indicated the least desirable characteristics. Most comments related to being unprepared for teaching, being judgmental and using unconstructive criticism

**Conclusions:** The results highlight the importance that there are certain characteristics which are important for clinical teachers to be role models. Knowing which characteristics students look for in their role models should therefore help to identify the physician who may be most influential to medical students and young graduate career choices. Efforts are needed to encourage and facilitate clinical teachers to develop these characteristics.

**Keywords:** Role model, Characteristics, Medical Students

## RESEARCH AWARENESS: THE MISSING LINK BETWEEN CLINICAL KNOWLEDGE AND ITS APPLICATION

Sarah Khalid Khan<sup>1</sup>, Aamenah Malik<sup>1</sup>, AwaisAmjad Malik<sup>2</sup>, Samiullah<sup>2</sup>, Mariam Malik<sup>2</sup>

<sup>1</sup> CMH Lahore Medical College, Lahore, <sup>2</sup> Services Hospital, Lahore

**Background:** Despite the growing body of literature, ever expanding horizons of clinical research, the reality of getting research development and bringing evidence into practice remains problematic.

**Purpose:** The purpose of this study was to investigate Post Graduate Residents' (PGR) attitudes towards research and to establish levels of research awareness and elucidate various barriers that may have an impact on their attitudes, awareness and restricted research development.

**Methods:** This was a descriptive quantitative study. A convenience sample of 150 registered PGRs working in a government hospital in Lahore was taken. Parametric and nonparametric statistics were used.

**Results:** A total of 130 questionnaires were returned. The response rate was 65%. Most of the PGRs had a positive attitude towards research. One hundred and seventeen (91%) PGRs overwhelmingly agreed with the idea that evidence-based practice is the way forward to modify clinical practice. Significant associations were noted between levels of confidence to undertake a piece of research and whether the individual had received adequate information about the research process, had basic knowledge and understanding of the research process, or had research awareness education or training. The most critical barrier to conducting research was lack of institutional support.

**Conclusions:** The study shows that PGRs, regardless of training level, have a positive attitude towards research but face many obstacles. The key obstacles are lack of time, support, knowledge, and confidence. In spite of the overall positive attitudes to medical research, the study demonstrates the theory practice gap is still present to some degree.

**Keywords:** Attitude, Awareness, Research, Clinical Practice

## BRIDGING THE DIVIDE: OUTLOOK AND PERCEIVED BARRIERS TO EVIDENCE BASED PRACTICE AND RESEARCH UTILIZATION AMONGST PAKISTANI RESIDENTS

Aamenah Malik<sup>1</sup>, Sarah Khalid Khan<sup>1</sup>, Mariam Malik<sup>2</sup>, Awais Amjad Malik<sup>2</sup>, Samiullah<sup>2</sup>

<sup>1</sup>CMH Lahore Medical College, Lahore. <sup>2</sup>Services Hospital, Lahore.

**Background:** No other field today is as rapidly evolving as the field of medicine, making it critical to be aware of latest advances in research and more critical to implement and practice evidence based medicine.

**Purpose:** The purpose of this study was to expound the standpoint of Pakistani Post Graduate Residents (PGRs) towards research.

**Methods:** A self-completion validated Research Awareness Questionnaire (RAQ) by McShirley having demographic data, awareness, attitude scale and expected hurdles to conducting research was distributed amongst one hundred PGRs currently working in a government hospital in Lahore. Parametric and non-parametric statistics were used for data analysis.

**Results:** 91% agreed that evidence-based practice is the way forward to change clinical practice. However 35% intended to use medical journals routinely during future practice. Only 38% of the PGRs were capable of writing research papers but surprisingly only 17% were confident in conducting independent research without supervision. They were unable to read medical journals owing to lack of compulsion (42%) and lack of subscribed journals (21%). The most decisive barriers to conducting research were lack of motivated supervisors (40%), delays in research topic approval (33%), inadequate training (26%) and lack of dedicated research teams (22%).

**Conclusions:** The PGRs had a positive attitude towards research but this attitude alone isn't enough to fill this gaping hole between theory and clinical practice. The hurdles are massive but not impossible to overcome if a centralized and structured approach by the degree awarding authorities is implemented to formulate, conduct, implement and evaluate active research development at postgraduate level.

**Keywords:** Research Awareness, Evidence-Based Practice, Attitude, Barriers

## INTEGRATION OF CLINICAL AUDIT IN POSTGRADUATE MEDICAL EDUCATION: TOWARDS IMPROVING PATIENT CARE

Mansoor Dilnawaz

CMH, Kohat

**Background:** The aim of the clinical audit is to ensure that clinical practice is continuously monitored and that deficiencies in relation to set standards of care are remedied.

**Methods:** The study was conducted in Combined Military Hospital, Kohat and Military Hospital Rawalpindi from 1st November 2014 to 1st Jan 2015. This was cross-sectional survey. Evaluation questionnaire was designed and distributed to 30 postgraduate medical students for their response regarding the importance and integration of clinical audit into the postgraduate medical education. Interviews were also conducted from these doctors and the responses were recorded on a five point Likert scale where one (1) indicated strong disagreement and five (5) indicated strong agreement.

**Results:** The overwhelming majority of responses were in favor of clinical audit. The doctors felt it is important to undertake regular clinical audits in a professional and ethical manner, that they would find very useful for them in particular and for the organization in general. They felt the audits would go a long way in improving patient care and in preventing cases of clinical negligence. The respondents showed eagerness in attending professional workshop on clinical audit.

**Conclusions:** Clinical audit is a key component of clinical governance. It guides us if we are doing the right thing in a right way. It therefore seems logical to engage doctors and integrate clinical audit as an essential module in postgraduate medical education. Although this study was carried out for postgraduate medical education, the concept is quite transferable to a variety of other related health professional curricula.

**Keywords:** Clinical Audit, Clinical Governance

## WORKING UNDER PRESSURE- A CHALLENGE FOR PHYSICIANS/DOCTORS

Seema N. Mumtaz

Department of Community Health Sciences, Malir Cantt. Karachi

**Background:** This study was conducted to find the different sources of occupational stress due to work pressure and the effect of this on the job performance among doctors (Registrars/lecturers) working at a tertiary care hospital.

**Methods:** The study was conducted at Tertiary care Hospital of Karachi, during October and November 2008. The sample comprised of 104 doctors (Registrars/lecturers) working in different departments a tertiary care hospital. Occupational stress and job satisfaction was assessed by Pressure Management Indicator in a pretested questionnaire.

**Results:** Majority of the sample (74%) was working on full time whereas 26% were working on contract basis. The mean working hours in a week were 51.16 hrs + 8.98 hrs. Majority of participants (70%) felt secure in their organization. 68% doctor's complaint of carrying their work at home. 62% complaint of their job Problems have kept them awake at night. 56% felt a threat of layoff or demotion. 58% felt that they had too much to do and too little time in which to do it. 88% doctors felt they were supervised. 35% said their mothers are their best friend while 34.5% had reading as their hobby..

**Conclusions:** It appears that the doctors (Registrars/lecturers) at a tertiary care hospital have a high index of occupational stress and majority of it generates from the administrative disorganization and less from the personal or the monitory factors. The effect on job performance was delayed work output, outcome & impact.

**Keywords:** Stress, Job performance, Pressure Management

## STATE OF MIND; REFLECTION OF OUR SURROUNDINGS

Rehana Rehman

Aga Khan University, Karachi

**Background:** Workplace wellness includes organizational policies designed to facilitate a culture with availability and use of resources to expand knowledge, improve skills and enhance productivity.

**Purpose:** Present study is aimed to know intellectual wellness in relation to work place environment among doctors teaching basic sciences in public and private MU of Karachi.

**Methods:** A cross sectional questionnaire based survey was conducted on 200 male/female doctors in 3 public and 6 private Medical universities from January to December 2013. Questionnaire was tailored from "Wellness wheel" and responses were obtained on items of work place and intellectual wellness as; never, sometimes, mostly and always (numbered 0-3). Collected data was analyzed using IBM (Chicago, Illinois, US) version 21. Reliability of responses was measured by Cronbach's alpha. Response of each item was added to make score of wellness presented in terms of Mean  $\pm$  standard deviation (SD). Mann-Whitney U test was executed to compare workplace and intellectual wellness in sectors of MU; results declared significant with p value <0.05.

**Results:** Of the 183 complete response from teachers 66% (n = 120) were females. Teachers from private MU attained significantly higher scores in intellectual (24.8  $\pm$  4.5 vs. 22.8  $\pm$  3.6, p=0.003) and work place wellness (32.9  $\pm$  6.9 vs. 30.5  $\pm$  4.6, p=0.009) as compared to doctors teaching in public MU. The work place wellness correlated with intellectual wellness in private MU (r=0.430, p 0.01).

**Conclusions:** Intellectual wellness of doctors teaching basic sciences in private MU was better than those in public MU on account of provision of better work place facilities.

**Keywords:** Wellness Wheel, Occupational Wellness, Intellectual Wellness, Medical Universities

## EVALUATION OF BASIC SCIENCE COURSES FOR PREPARATION OF WORK IN THE CLINICAL SETTING AND POSTGRADUATE EXAM PREPARATION; A SURVEY OF IIMC STUDENTS

Amena Rahim

Islamic International Medical College, Riphah University, Islamabad.

**Background:** Postgraduate exams consist of a major chunk of basic sciences. The purpose of this study was to gather information on the student's perception of basic science courses for preparation of work in the clinical setting as well as postgraduate exam preparation as in the 4th and final year of their studies.

**Methods:** Qualitative cross-sectional descriptive survey conducted during the 2013-2014 academic year among medical students. Data were arranged as numbers and percentages; significance was defined as  $P < 0.05$ .

**Results:** 50.8% were dissatisfied, when asked whether integration and coordination of Basic Science contents was sufficient, 54.6% of the participants gave a negative response. 50.3% disagreed that the content was organized. 46.4% of the respondents agreed that there was clarity of objectives, 39.3% students showed a positive response that the content was clinically relevant, only 45.4% & 41.5% agreed to the relevance of basic sciences to clerkships and its importance in preparation for postgraduate exam. Clarity of subject was highest for anatomy, physiology and community medicine i.e. 53.6%, 62.8% and 55.7%, least was for pathology 37.2%. Highest importance was given to the following subjects in clinical settings; Forensic medicine 77.5%, pharmacology 62.8% community medicine 51.4%, followed by anatomy and physiology. As far as teaching strategy is concerned, lectures are approved by 57.9%, but the knowledge acquisition is by field trips is favored by 55.7%, followed by PBL 54.6% and SGD/skill labs.

**Conclusions:** Students had a positive attitude towards most of the basic science subjects as they could relate their importance of these to the clinical and postgraduate setting.

**Keywords:** Basic Science Subjects, Clinical Setting, Postgraduate Exam

## EVALUATION OF EDUCATIONAL ENVIRONMENT AT MILITARY HOSPITAL (MH), RAWALPINDI USING THE POSTGRADUATE HOSPITAL EDUCATION ENVIRONMENT MEASURE (PHEEM) QUESTIONNAIRE

Sohail Sabir

Armed Forces Postgraduate Medical Institute, Rawalpindi, Pakistan

**Background:** Provision of an ideal educational environment in Military Hospital (MH), Rawalpindi, is the responsibility of clinical directors and medical educationists as well as the administrators and the evaluation of such environment is the overall responsibility of the Armed Forces Postgraduate Medical Institute (AFPGMI).

**Methods:** it is a quantitative, cross sectional study over 6 months using census as sampling technique. The 40 item PHEEM questionnaire was administered to the military trainees. The statistical analysis conducted by using SPSS 17.

**Results:** A total of 70 out of 80 residents participated in the study. Both genders were represented in the respondents comprising of 74.3% males and 25.7% female doctors. Among the respondents, 48.6% were from medicine, followed by 22.9% from Pathology, 11.4% from Pediatrics, 8.6% from Psychiatry and rest from Dermatology and Nuclear Medicine. The internal reliability of the questionnaire was high with a total Cronbach's Alpha value of 0.805 which indicates high level of internal consistency of our scale. The questionnaire further revealed Cronbach's alpha value of 0.844 for subscale of autonomy, 0.937 for teaching and 0.850 for social support. The perception of autonomy was better amongst residents of dept. of Nuclear Medicine with mean score of 51 for autonomy ( $p < 0.001$ ). Apparently residents of dept. of Nuclear Medicine have better teaching opportunities compared to others (59) followed by medicine (54.35).

**Conclusions:** This study confirms that PHEEM is a reliable instrument for evaluating the quality of the learning environment.

**Keywords:** PHEEM, AFPGMI, Postgraduate, Training, Military Hospital

## COMPARISON OF THE CURRICULUM DESIGNS IN MEDICAL EDUCATION

Naheed Khan

Dow University of Health Sciences, Karachi

**Background:** To compare the outcome of students studying under traditional system from those following integrated modular curriculum at Dow Medical College.

**Methods:** This questionnaire based study was conducted on 250 MBBS students of Dow Medical College. Two groups of MBBS students were included in the study, those who are studying under the Integrated Modular Curriculum design and those who completed their MBBS under the Traditional Semester Curriculum.

**Results:** According to this questionnaire based study conducted on students of Dow medical College, 40% of the students who followed the traditional semester system had their cGPAs in the range of 3.0 - 3.4, followed by 20% in the range of 3.4-3.7. On the other hand, students who are following the integrated modular curriculum, 39% had the GPAs in the range of 2.5-3.0, followed by 28% in the range of 3.0-3.4. The leading problem noted in the IMS via comparison of 2 systems was that around 76% students believed that their system was tightly scheduled with excessive workload & less time for creative / extracurricular activities. In contrast, majority of the TSS followers (nearly 69%) believed that their curriculum design was comparatively less stressful, comprehensive and flexible, enabling the students to manage their time among academic and extra-academic activities.

**Conclusions:** It is concluded that IMS is richer in information than TSS including early orientation to clinical knowledge, skills lab and elective program, with integration between basic and clinical sciences.

**Keywords:** Integrated Modular System, Traditional Semester System, Self-directed / Problem based learning

## SELF EVALUATION OF ETHICAL REVIEW COMMITTEE'S FUNCTIONING AT FOUNDATION UNIVERSITY MEDICAL COLLEGE THROUGH STRUCTURED CONSTITUTION-PRACTICE-OUTCOME (CPO) ASSESSMENT MODEL

Sadia Ahsin

Foundation University Medical College, Islamabad

**Background:** Ethical Review Committee (ERC) was established in 2011 at Foundation University Medical College. Its functions to provide independent advice to researchers and professionals on the extent to which their proposals for research comply with WHO and CIOMS (Council for International Organization of Medical Sciences) recognized ethical guidelines. Globally regular evaluation is recommended for quality assurance and working of ERC for better future outcomes. Assessment of ERC performance can be done through development of various standard operating procedures or self assessment tools and critical feedback from researchers. Since it was the need of the hour to evaluate the functioning of ERC at FUMC, therefore current study was designed.

**Purpose:** To determine the operational efficiency of Ethical Review Committee (ERC) at Foundation University Medical College.

**Methods:** On the basis of literature review, methods for assessment of various features of ERC were studied. A constitution-practice-outcome measurement model for evaluation of ERC assessment process was developed. Data submitted to ERC since its constitution were extracted and quantitatively analyzed.

**Results:** ERC constitutes a mixture of permanent and rotating clinical and basic sciences trained faculty. Out of 45 research protocols, submission and notification process was mainly manual, with average duration of 7.2 days from the time of first submission to final notification. Issues looked into were according to WHO guidelines. Standard review was done on 29 studies and expedited on 16 studies. 24 protocols needed re-submission. Minimum number of reviewers was 2 for descriptive type of studies. Only 2 protocols were not approved. Main reasons for re-submission were found to be incomplete documents, invalid informed consent and negligence in maintaining confidentiality of study participants.

**Conclusions:** ERC with its limited resources is fulfilling its founding objectives however the picture will be clearer after incorporating critical feedback from the researchers, which is the next step.

**Keywords:** Selfassessment, Ethical Review

## VALIDATION OF THE DUNDEE POLY PROFESSIONALISM INVENTORY-1 FOR USE IN PAKISTAN, TO MEASURE ACADEMIC INTEGRITY

Irfan Shukr

Quetta Institute of Medical Sciences, Quetta

**Background:** Academic integrity is an essential element of professionalism. There are reports of cheating, plagiarism and unprofessional behaviour of Pakistani medical students. Doctors who are trained in Pakistan and other developed countries are more likely to be subjected to disciplinary actions by the medical councils than those trained in the developing countries. These reports indicate that there might be serious issues related to academic integrity in Pakistan that require identification and their resolution. First step is to measure academic integrity. One tool available is Dundee Poly professional Inventory -1.

**Purpose:** To validate the Dundee Poly professionalism Inventory-1 for use in Pakistan.

**Method:** In this cross sectional study, a stratified sample of 64 students, and 16 faculty members participated. Words and statements in the inventory that a majority of Pakistani students could not understand were replaced by simpler words, or sentences for better understanding of our students. Faculty reviewed the proposed sanctions for their appropriateness in the Pakistani setting.

**Results:** Out of 64 students, 57 students responded (Response rate 89%). Out of 16 faculty members, 12 responded (response rate 75%). The language of 8 statements in the inventory that a majority of students could not understand was changed. 50% or more of faculty members considered that the statements in the inventory were appropriate. 9 faculty members (75%) suggested, "Making false entries in logbooks/signing such log books", and 10 faculty members (83%) suggested, "Writing/getting signed false certificates" should be included in the inventory. These were included in the validated questionnaire. Similarly 50% or more of faculty considered that the different types of sanctions and the level of sanctions were appropriate.

**Conclusions:** This customized form of the Dundee Poly Professionalism Inventory-I can be used in Pakistan, and other South Asian countries to assess professionalism related to academic integrity

**Keywords:** Academic integrity, Poly professional inventory-1

## TEACHING ETHICS AND PROFESSIONALISM TO FOURTH YEAR MEDICAL STUDENTS IN A PRIVATE MEDICAL COLLEGE

Faisal Rashid, Salman Tipu, Shahzad Inayat, Rukhsana Ayub

Al-Nafees Medical College, Islamabad

**Background:** Medical education has been undergoing a transition over the past decade. Professionalism and ethics form the cornerstone of medical profession and provide an imperative foundation for the students to graduate as competent doctors. However the ground realities are quite worrying. Teaching of medical ethics and its application in clinical work is poor and left to chance.

Integrated system based curriculum was introduced in 2013 at Al-Nafees Medical College & Hospital. The teaching of the above mentioned attributes was decided to be implemented horizontally as well as longitudinally. Additionally a 'Foundation of Medical Practice 2 (FOMP2)' was planned right at the beginning of fourth year clerkship program.

**Purpose:** To sensitize students to the ethics of clinical work and research on human subjects.

**Methods:** Main themes identified were Communications skills, Research, Introduction of bio ethical principles and evidence based practice. Mainly a workshops based format was used during this highly interactive course. Qualified and experienced professionals were invited to conduct sessions on introduction to research, biomedical ethics and communication skills. Students were also introduced to the ethics of conducting research on human subjects and dealing with ethical dilemmas in their everyday clinical work. Students filled a feedback survey in terms of their perceptions about the process.

**Results:** The students liked the organization of the module. They benefitted from the various components of the module and reported increase in their knowledge about communications skills.

**Keywords:** Medical Ethics, Professionalism

## BROADER EDUCATION FOR FIRST YEAR MEDICAL STUDENTS IN A PRIVATE MEDICAL COLLEGE

**Salman Tipu, Faisal Rashid, Shahzad Inayat, Rukhsana Ayub**

Al-Nafees Medical College, Islamabad

**Background:** To practice as health care professional, many attributes like communications skills, ethics and professionalism, critical thinking and problem solving, social awareness and cultural competency, in addition to good cognitive abilities and clinical skills are required. Learning of these important attributes cannot be left to chance alone. For the curriculum to be holistic, the principles of bioethics and professionalism as well as humanities and social sciences should be incorporated in all the years of curriculum. Integrated system based curriculum was introduced in 2013 at Al-Nafees Medical College & Hospital. The teaching of the above mentioned attributes was decided to be implemented horizontally as well as longitudinally. As a first step, a Foundation Course known as Foundation of Medical Practice I (FOMPI) was planned right at the beginning of the first year.

**Purpose:** To sensitize students to importance of ethics, professionalism as basic foundation of medical practice.

**Methods:** A blueprint comprising of important attributes related to ethics, professionalism, multi-culturalism, communications skills, and research ethics was developed. This helped us to develop themes which were spread over two weeks. Multiple educational strategies especially those which would be utilized for teaching and learning during the course of next five years were used. These included interactive large-class format (LCF) sessions, tutorials, workshops, videos, role playing, patient interviewing, problem-based learning (PBL) and debates. Many eminent speakers from different walks of life were invited to give religious and historical perspectives to the students. These included philanthropists, lawyers, engineers, senior professors and researchers. A number of cases on Ethical issues were developed by a team of faculty members in discussion with educationists. Students filled a feedback survey in terms of their perceptions about the process.

**Results:** The students liked the process in terms of the diverse areas of broader education. They increased their knowledge about the competencies expected from them and also learnt about the various teaching and learning strategies.

**Keywords:** Broader Education, First Year Medical Students

## PORTFOLIO-WORKBOOK: AN INNOVATION IN TEACHING ETHICS & PROFESSIONALISM

**Muhammad Shahid Shamim**

King Abdulaziz University, Jeddah, Kingdom of Saudi Arabia

**Background:** Ethics and Professionalism (E&P) are considered essential parts of competencies for medical graduates and have become a part of formal curriculum in almost all healthcare institutes. Although considered not suitable, lectures are the most commonly used method of teaching E&P courses in developing countries. Additionally, there are no evidence based, recommended strategies for teaching ethics in order to achieve the outcomes of ethics course in most medical colleges of the world. We developed a Portfolio-Workbook (PWB) for E&P Course at our College. The PWB follows the principles of cognitive load and guided learning theories.

**Purpose:** The aim of this study is to analyze students' perception regarding the innovative use of PWB in E&P module at faculty of Medicine, Rabigh, King Abdulaziz University.

**Method:** A mixed method study, involving self-administered questionnaire and focused group discussions, was conducted with students of 4th year, during the E&P module in 2014. During a two week ethics module, students shared their experiences as reflections and completed the exercises given in the PWB, with small group discussions, students' presentations, video demonstrations and role-plays as supplementary teaching and learning tools for completing these exercises.

**Results:** Twenty students of 4th year class of 2014 completed the questionnaire and focused discussion. PWB was appreciated by 19 out of 20 students (95%). At the start, 50% thought it was difficult for them, however, after completion of the module 75% considered it easy to follow. Students also appreciated the use of supplementary tools, with majority considering teaching videos and open discussions as extremely effective.

**Conclusions:** Use of portfolio workbook not only helped in enhancing logical thinking but also aided in improving English language and reflective writing skills in our students. It incorporates written information with discussion and reflection for learning which gives it the strength.

**Keywords:** Ethics, Professionalism, Innovation, Teaching and Learning

## THE RATIONALE BEHIND THE LIMP APPROACH OF PAKISTANI PHYSICIANS TOWARDS RESEARCH: IS THERE A SOLUTION?

Fatahiya Kashif

Sialkot Medical College, Sialkot

**Background:** Globally the premedical education prepares the students for a career in clinical medicine as well as research. If the prospective doctors are not trained in logical reasoning and critical thinking skills early in their careers, they fail to develop the proficiency needed to become good researchers. With this ruined motivation, the quality of research also suffers. We have tried to identify the limiting factors in our educational pipeline and to come up with some solutions, so that our physicians would become first rate researchers.

**Methods:** Survey of 46 volunteer medical students (28 freshmen and 18 sophomores) was carried out. These students underwent a week long workshop on basics of research methodology before carrying out simple research projects. Finally, they were interviewed about their research experience and the insufficiencies in their high school training. These students were required to fill out a structured questionnaire about their proficiency in basic research tools. The ability in math, statistics and computational skills, was based on a likert scale from 0-5 (zero corresponding to low proficiency and 5 corresponding to expert level). The students themselves rated their adeptness. The average level of proficiency in math was about 3 corresponding to fair capability. Finally, an opinion poll was carried out about the early intervention of novel learning methodologies, modification of premedical set of courses and restructuring of Pakistani MCAT.

**Results:** This short survey evidently demonstrates the deficits in the training of our premedical students. Despite the fact that the students had access to computers, and spent considerable time online, a significant proportion of students were not familiar with data retrieval and advanced search methods. For most of them it was the first time in their lives that they were involved in some sort of research. Majority of the students failed to figure out what to do with their data. Whereas few students were quite zealous to learn research methods, majority of them were tense and uneasy.

**Conclusions:** If Pakistani educational system is not updated and reorganized, our physicians will not be able to share a significant role in shaping the future of medicine. We have made the following recommendations for Pakistan: 1.The scientific method should be initiated from preschool to high school level through modern approaches. 2.Research methods and basic statistics should be part of premedical curriculum. 3.Learning of computational skills required to accomplish a successful research project should be made obligatory for students before entering medical school. 4.Mathematics should be one of the core subjects for biology students. 5.The medical students who lack training in basic research skills should be offered deficiency courses to overcome their insufficiencies. 6.The Pakistani MCAT should be restructured according to above mentioned criteria and medical college admission criteria revised.

**Keywords:** Premedical education, Medical Informatics, Biostatistics, School admission criteria

## POINT OF CARE TESTING: AN EFFECTIVE APPROACH TO DEVELOP SOCIAL RESPONSIBILITY AND ADDRESS IRON DEFICIENCY ANEMIA IN WOMEN AND CHILDREN OF RURAL PAKISTAN

Rukhsana Ayub<sup>1</sup>, Faisal Aziz, Lara Motta, Brooke Spaeth, Anne Shephard, Mark Shephard

<sup>1</sup>Al-Nafees Medical College, Islamabad

**Background:** Participation in Service Learning (SL) projects increase social responsibility in medical students and provide them opportunities to prevent chronic public health problems like Iron deficiency anaemia (IDA). Additionally, Haemoglobin (Hb) testing through POCT improves immediate clinical management of IDA patients who otherwise are unable to access health care facilities.

**Purpose:** To educate women and children about causes, effects and prevention of IDA; to develop social responsibility in undergraduate medical students; and to develop a community-based POCT model for detecting IDA.

**Methods:** Twenty two students and four community workers learned about IDA and received online training on quality-assured POC Hb testing on the HemoCue 301 by Flinders International POCT via video conference. They tested Hb of women and children and educated them about IDA either at health facility or door-step. Patients identified with IDA were given immediate treatment. Students developed a health education campaign. Knowledge of women and social responsibility in students was compared before and after interventions via rater scales. A quality control program was implemented to monitor the analytical quality of field Hb testing. Focused group discussions (FGD) were conducted for students.

**Results:** During March April, 2014, 122 women and 36 children were tested for Hb and educated about IDA. Health education was imparted through 10 group sessions and 474 individual sessions with 3 sessions/ participant. The prevalence for anaemia (Hb < 12 g/dl) in women and children were 52% and 48% respectively. The knowledge of women and civic responsibility in students increased substantially after interventions. The four HemoCue devices used exhibited sound analytical field performance (between-device imprecision for Hb 1.7% and 1.3% for the two control materials tested (n= 32).

**Conclusions:** The social responsibility of students increased significantly through SL. The POCT improved access of women and children to Hb testing and ensured timely management of IDA.

**Keywords:** Service Learning, Iron Deficiency Anaemia, HemoCue, Focused Group Discussions



## ROLE OF TEACHING COMMUNICATION SKILLS AND ETHICS IN MEDICAL EDUCATION

Ghulam Murtaza Gondal

Foundation University Medical College, Islamabad

**Background:** To create awareness of the privileges and limits of one's role as physician, as well as recognition and respect for the patient and colleagues as a human being in young future doctors.

**Methods:** A 2-days workshop was designed in April 2013 by a multi-disciplinary team which included various themes like doctor-patient relationship-building skills, breaking bad news, dealing with distressed patients and patients with psychosocial issues and conflict resolution along with negotiation skills. At the end of the workshop role playing on these issues was conducted and evaluated by a panel of teachers. Students evaluated themselves on a pre-post workshop survey form to see the impact of training on their communication skills and bioethics understanding.

**Results:** The survey showed a marked increase and improved understanding and awareness of communication skills and bioethics among medical students.

**Conclusions:** So far communication skills and especially bioethics are not taught in Medical Colleges in Pakistan systemically and if taught it is haphazard. There is no literature documenting the process used or the impact of teaching on attitude and behavior of students. Our study proves that these workshops are not an ivory tower concept and can be conducted successfully by training in-house faculty and with minimum logistics.

**Keywords:** Communication Skills, Bioethics, Medical students, Interactive Workshop

## TEACHING OF MEDICAL HUMANITIES IN MEDICAL UNIVERSITIES OF PAKISTAN

Nusrat Shah

Dow University of Health Sciences, Karachi

**Background:** Medical graduates in Pakistan lack motivation and commitment towards their profession. One important reason may be that our medical curriculum overemphasizes competencies related to biomedical sciences and does not formally teach humanistic qualities and professionalism, competencies which can help doctors understand the real life problems of patients. Consequently, our people have more faith in spiritual healers and quacks than in doctors. A radical reform in our curriculum is needed in the form of teaching medical humanities which can help produce physicians who are sensitive and compassionate enough to honor the dignity of their patients and to better understand their problems. This will promote mutual respect, understanding and good clinical decision making which is more likely to satisfy and benefit the patients and ultimately the whole society.

**Purpose:** The purpose of this position paper is to start a debate on the need for including medical humanities in the undergraduate medical curriculum of Pakistan and to guide decision making in this regard.

**Keywords:** Medical Humanities, Humanism, Undergraduate Medical Education

## IDENTIFYING THE BARRIERS IN GETTING ETHICAL APPROVAL

Madiha Imran

Foundation University Medical College, Islamabad

**Background:** There has always been a weak link between the researchers and review boards. Researchers lack confidence in ethical review committee (ERC) decisions and consider them to be unjust and biased. Most often they complain that extended procedures results in delaying research rather than expediting it. Thus, getting an ethical approval is considered a challenge. Lack of clarity concerning the framework and working of ERC is one of the main causes for this growing tension. It was therefore required to study the problems faced by researchers applying for ethical review with the vision to improve the efficiency of our ethical committee.

**Purpose:** To identify the barriers faced by the researchers applying for ethical review at ERC and to assess the efficiency and effectiveness of ERC at FUIC through critical feedback.

**Methods:** After ethical approval, a pilot study was conducted. Questionnaire was distributed among the faculty members of FUIC. Their identities were kept confidential. The data was collected regarding the problems faced by the researchers in obtaining ethical approval and their opinions about the working of ethical committee. A descriptive analysis was done using Excel sheets.

**Results:** There was generalized lack of awareness among the faculty members about the legal framework of ethical review processes. Most of them were concerned regarding delays in getting approvals.

**Conclusions:** The results depicted that researchers consider attaining ethical approval as a menace so regular workshops, seminars and training programmes should be organized to facilitate researchers in writing research protocols and to increase awareness about ERC working.

**Keywords:** Ethics, Ethical Review, Effectiveness

## FACULTY PERCEPTIONS AND OBJECTIVE IMPACT OF FACULTY DEVELOPMENT WORKSHOPS

Khadija Qamar

Army Medical College, Rawalpindi

**Purpose:** The aim of this descriptive study was to document the perception of participants and the impact of faculty development and related educational workshops arranged in a public sector medical education setting.

**Methods:** During 2013 to 2014, nine faculty educational workshops were arranged by the faculty members of the Departments of Medical Education (DME), Army Medical College and Armed forces Post Graduate Medical Institute, Rawalpindi, Pakistan. Both clinical and pre-clinical teaching faculty members attended the workshops. Proper consent was taken from each participant to document their perceptions for this study.

**Results:** Two hundred and forty of the teaching faculty members of Army Medical Corps participated in different proportion for the workshop arranged during a period of one year. The study addressed the perceptions of the participant regarding impact of workshop, the facilitator's knowledge about the workshop topic and his/ her communication skills. Perceptions of the participants regarding the organization of the workshops, overall evaluation of the workshops along with the future support and relationship with regards to all of these workshops were also gathered. The responses of the participants were documented for each question and the percentages were calculated.

**Conclusions:** The planning efforts of professional development workshops by the departments of medical education at Army Medical College and Armed Forces Postgraduate Medical Institute resulted in a satisfactory implementation of the set objectives for faculty development.

**Keywords:** Faculty development, Medical Education, Workshops

## ACADEMIC SATISFACTION AND PERFORMANCE OF MEDICAL STUDENTS OF A PRIVATE UNIVERSITY IN HYDERABAD CITY, SINDH, PAKISTAN

Hussain Bux Kolachi, Nudrat Zeba , Suhail Ahmed Bijarani

Isra University, Hyderabad

**Purpose:** To measure the satisfaction level of medical students of a private university and performance in examination, to access satisfaction in Matric, Intermediate and M.B.B.S and to compare satisfaction of students with other universities of Pakistan and other countries.

**Methods:** A cross-sectional and comparative study at Community Medicine Department of Isra University from 1st January to 31st July 2014. Questionnaire was designed and pretest and was filled by Medical students of MBBS and physiotherapy students.

**Results:** Study was conducted on 189 students. Out of these 85 were male while 104 were female. There were 82 belonging to Rural area while 107 were from the urban areas. Academic performance and satisfaction of the students in matric was as 10 showed low satisfaction, 92 medium satisfaction and 88 high satisfaction. In the same way in the intermediate 4 mentioned low satisfaction, 109 medium satisfaction and 71 high satisfaction. For MBBS or DPT 37 mentioned low satisfaction, 91 medium satisfaction and 86 high satisfaction.

**Conclusion:** Our Study reflects the private sector university teaching and academic environment and concludes that academic satisfaction and performance is the least in the university courses like MBBS and DPT. The reasons are change in residence, different pattern of examinations from annual to semester and high cost of fees and living cost and tuition practices not available in the university environment.

**Keywords:** Physiotherapy, Rural Area, DPT, Semester

## HOW TO CONDUCT A WORKSHOP ON MEDICAL WRITING: TIPS, ADVICE AND EXPERIENCE SHARING

Farooq Azam Rathore

CMH Lahore Medical College, Lahore

**Purpose:** Workshops on medical writing, peer support writing groups , buddy writing and faculty development workshops, can improve the knowledge and skills of the participants, increase writing productivity, publication rates and presentations of scholarly work at medical conferences.

**Methods:** One of the authors won an Author AID grant to conduct a series of workshops on medical writing in March 2014. Eight workshops were conducted in three months, benefitting more than 200 students and faculty staff.

**Results:** We offer lessons learnt during this educational activity, tips to improve the quality and delivery of the content with limited resources and maximizing the impact. Planning, rehearsal, motivation, resource management, good team work, practice, audience analysis and feedback can make a workshop an engaging, interesting educational activity and successful.

**Conclusions:** Workshops on medical writing are an effective way to teach the essential skills of medical writing to students and faculty members. There is a huge demand for these workshops in Pakistan. Experienced medical writers need to conduct these workshops to transfer their skills and to facilitate their colleagues and students to become better medical writers.

**Keywords:** Medical Writing, Writing Skills, Presentation Skills, Education, Learning, Workshop

## MAINTAINING LIFE SUPPORT SKILLS: EXAMINING A FEASIBLE STRATEGY

Musarrat Ul Hasnain

Punjab Medical College, Faisalabad

**Purpose:** To assess the impact of over learning on retention of cardiac first response course in undergraduate medical students and to know whether over-learning of skills prevents decay in Cardiac First Response Course in final year MBBS students?

**Methods:** The study used a quasi-experimental design to compare the final year student's of Punjab Medical College having 60 students in over-learning and the same number in the control group. Both groups completed two days of standardized training and MCQ as well as skill test scores on checklists for adults and infants. Experimental group practiced the skills for additional 2 hours amounting to 50% over learning. Both groups completed same MCQ and skills tests after six weeks. Data was analyzed using SPSS version 15 and independent t test was performed for comparison of means of both skill test results.

**Results:** In 1st time test the MCQ scores mean was 22.8 (n=60) and 21.92 (n=60) for the experimental group and control group respectively. Test after six weeks (2nd time) resulted in score means of 19.20 (n=50) and 16.15 (n=53) for these groups with p value=.000. The total mean score of the experimental groups adult skill set was 101.42 (n=50) and that in control group was 97.79 (n=53) with p value=.008 in the 2nd time test. Important skills like chest compressions showed better retention in the experimental group.

**Conclusions:** Over-learning helps in better retention of procedural skills of CFR course after six weeks of non use.

**Keywords:** Undergraduate, Life Support Skills, Skill Retention

## DETERMINING FACTORS INFLUENCING CHOICE OF FAMILY MEDICINE SPECIALTY

Sumera Badar

Punjab Medical College, Faisalabad

**Purpose:** To examine the factors influencing choice of family medicine specialty.

**Methods:** study was carried in a public and a private sector medical college in Faisalabad. it was a mixed methods research. Sequential with quantitative first Population. It included all Final year students of both the colleges. 12 students were selected for in-depth interviews. Questionnaire was used for quantitative part and interviews for qualitative part. Quantitative part analysis was done by using SPSS version 20 and qualitative part by thematic analysis of interviews.

**Results:** Response rate was 96% and 90% in public and private sectors respectively. 6 students in public and 10 in private college opted for family medicine. Main factors for this decreased choice was lack of awareness and established departments of family medicine.

**Conclusions:** looking at the quantitative as well as qualitative data it is clear that awareness about family medicine is a major factor in adopting this specialty as a career. Further research is required to determine the awareness at country level.

**Keywords:** Family Medicine, Career Selection, Medical Students

## EVALUATION OF THE IMPACT OF METACOGNITIVE AWARENESS OF READING STRATEGY INVENTORY (MARSİ) ON ASSESSMENT SCORES AMONG MEDICAL UNDERGRADUATES WITH ENGLISH AS 2<sup>nd</sup> LANGUAGE: AN INTERVENTIONAL STUDY

Samina Malik

University of Lahore, Lahore

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

**Methods:** The construct validity of MARSİ was tested randomly with 24 medical students of 1st year 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 as well as 2nd yr medical undergraduates after intervention by MARSİ on applying paired samples test, though improvement in score of first year students was significantly higher as compared to 2nd year class by independent samples test. Among individual reading strategies, Mc Nemar's test showed significant increase in Global strategies in only 1st year students but no significant change in problem solving strategies in 1st year as well as 2nd year students, however, significant improvement was observed in support strategies in 2nd year students only.

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

**Keywords:** MARSİ, Metacognitive-awareness, Reading Strategies, Assessment, Evaluation

## TRAINING IN EMERGING ADVANCES IN THE MANAGEMENT OF CHRONIC HEPATITIS C INFECTION FOR HEALTHCARE PROFESSIONALS IN PAKISTAN: THE TEACH-PAK PROJECT

Faisal Wasim, Saeed Hamid, Shahab Abid, Minaz Mawani

Aga Khan University, Karachi

**Purpose:** We aimed to develop a state of the art educational resource that delivers up-to-date and relevant information regarding all aspects of HCV to the health care practitioner (HCP) community in the province of Sindh. Our target participants were young gastroenterologists and GPs who manage HCV.

**Methods:** Educational training comprised of 3 modules, each of 2 weeks duration. These were: 1. Epidemiology and prevention of HCV, 2. Diagnosis and assessment of severity of HCV 3. Treatment of Hepatitis C. Activities were primarily web based with some face to face interactive sessions (blended curriculum). All study material was in the form of PDF documents available for download and viewing on the website (<http://pssld-training.com/>). Discussions, questions and comments were encouraged. An overall pre and post intervention knowledge assessment was performed, in addition to individual module assessments.

**Results:** Two group sessions were held. Prior level of education and training were similar within the groups. In the 1st group, 38 participants appeared for both pre and post-tests out of 40. The mean pretest score of the group was 25.87 (SD 5.6), and the mean post test score was 34.21 (SD 5.0). This increase was statistically significant ( $t=8.51$ , P).

**Conclusions:** The TEACH-PAK project successfully imparted HCV CME to a diverse group of physicians through a blended learning curriculum. We hope to continue this project, improving it further, and taking this initiative nation-wide.

**Keywords:** Hepatitis, CME, Blended Learning

## PERCEPTION OF FACULTY PERFORMANCE BY STUDENTS

Gulnaz Ahmad

Armed Forces Post Graduate Medical Institute, Rawalpindi

**Purpose:** This paper offers an analysis of the PG trainees' perception of the teaching performance of clinical faculty

**Methods:** It is a satisfaction survey collecting quantitative data from second year PG FCPS trainees of batch 2013, AFPGMI. The data is collected in the form of a standardized feedback questionnaire (HEC) to be completed voluntarily by PG second year trainees from all clinical disciplines. This trainee satisfaction data provides information to teachers and institutions about the way they feel about the learning processes in which they are participating. The total number of trainees was 110 including all trainees of two FCPS Part II training batches. Confidentiality was maintained and feedback was acquired in a comfortable environment and under no duress.

**Results:** Students reported many examples of positive role models and effective, approachable teachers. They also described a hierarchical and competitive atmosphere, in which haphazard instruction and teaching by humiliation occurs. 82% of the trainees were satisfied with the organization of the of the lessons; 89% were satisfied with the variety of teaching methods used; 74% were satisfied with the ability of the tutor to keep the trainee interested; 85% of the trainees were not satisfied with the type and timing of feedback provided; 88% claimed that the tutors were not maintaining or encouraging a positive learning environment. The overall rating of teaching was fair.

**Conclusions:** The main outcome is The attitude of faculty requires attention to produce the necessary fundamental changes in the culture of postgraduate medical education.

**Keywords:** Perceptions, Students, Faculty.

## THE EFFECT OF PRE-EXAM QUALITY ASSURANCE ON THE DIFFICULTY, DISCRIMINATION INDICES AND CRONBACH ALPHA VALUES OF AN EXAMINATION

Mujtaba Farooq Rana

College of Medicine, Taif University, Kingdom of Saudi Arabia

**Purpose:** This study was done to see the effect of pre-exam item review (as part of the quality assurance procedure) on the performance of the items (difficulty, discrimination indices and Cronbach alpha values)

**Methods:** This study was done in the College of Medicine, Taif University. Data was obtained from examinations after permission. This is an exploratory study involving post exam analysis of 9 theory examinations of the same module in 2014. All analyses were done in SPSS version 17.0.

**Results:** The total number of MCQs from 2013 is 607 and from 2014 is 647, and the total number is 1250. It is evident that in 2014, when pre-exam analysis was done, the discriminatory ability of MCQs is more than that in 2013. MCQs in 2014 show a general trend of lowering of the difficulty index, i.e. the items were less difficult. Also, reliability of exams where pre exam review was done is significantly better than of those in which this process was not done. By t-test, statistical differences among the discrimination, difficulty and alpha values were calculated. It was found that there is a highly significant difference between the two years.

**Conclusions:** There seems to be a highly statistically significant ( $p=0.000$ ) improvement in the overall quality of the MCQs after pre-exam review was done.

**Keywords:** Pre-exam quality assurance, discrimination, difficulty and reliability indices

## NEW PROBLEMS IN NATIONAL COMPETENCE TEST OF PHYSICIANS IN INDONESIA (NCTP)

Faisal Ridho Sakti

Faculty of Medicine The Islamic University Of Indonesia

**Purpose:** The purpose of this paper is to explore a variety of new problems that arise in NCTP from 2007 until 2013.

**Methods:** The methods are mix qualitative and quantitative in data collection and source of data such as literature review, in-depth interviews joint committee NCTP, Association of Indonesia Medical Education members and a survey of participants NCTP and the new physician graduates FMIUI.

**Results:** Of the various sources of data showed that the problem arises because the dualism of legal standing, lack of financial transparency, different interests in the joint committee NCTP, expensive cost and ineffective coaching process and about the poor quality of question exam so that the answers vary even among specialists had many different answers. Certain faculty of medicine which greatly contributed in construction of NCTP questions usually had a lot of students who graduated NCLP.

**Conclusions:** NCTP still have several problems in Indonesia that require to be solved.

**Keywords:** New Problem, Competence Test, Physician, Indonesia

## PERCEPTIONS OF STUDENTS AND FACULTY REGARDING PROBLEM BASED LEARNING; PRIVATE AND PUBLIC SECTOR COMPARISON

Zarmina Saga

Rawal Institute of Health Sciences, Islamabad.

**Purpose:** To analyze and compare the perception of students and faculty regarding a modern methodology i.e, Problem Based Learning (PBL) in a public and a private sector medical college of Pakistan

To analyze and compare the perception of students and faculty regarding a modern methodology i.e, Problem Based Learning (PBL) in a public and a private sector medical college of Pakistan

**Methods:** Comparative study conducted using standardized questionnaire forms. The study is carried out in a class of first year MBBS students at Rawalpindi Medical College (group A) during the year 2007-08 and at Rawal Medical College (group B) during 2013-14. In both institutes the curriculum for first year was divided into system based modules. Basic Sciences teaching was augmented by problem-based learning (PBL) in an integrated manner. Students were allocated randomly to batches each comprising of 14-15 students. One facilitator was randomly allocated to each student's batch. The response of students was evaluated based on structured questionnaires and the assessment was done by the faculty on structured evaluation forms. SPSS 17.0 was used for statistical analysis.

**Results:** Student's response was categorized in four groups; quantitative analysis showed that majority of students from group A and B respectively agreed that all members were involved as a team (62.6% & 57%), newly introduced PBL facilitated their learning process, the learning environment was beneficial (64.9% and 61.8%), and facilitator was helpful to complete the task given (55.3%, 78% and 64.54%). The facilitators rated the performances of the students. The mean score of the students was 14.74 (group A) and 10.64 (group B) the difference being statistically significant.

**Conclusions:** Regarding PBL there is no difference in perception of students in a public and private medical college but there is statistically significant difference in performance of students, public sector students getting higher scores.

**Keywords:** PBL, Integrated Modular System, Small Group Teaching

## RESEARCH ORIENTED PROGRAM OF 4TH YEAR MBBS STUDENTS AT YUSRA MEDICAL & DENTAL COLLEGE, ISLAMABAD SHARING EXPERIENCE OF COMMUNITY-BASED MEDICAL EDUCATION

Farah Rashid Siddiqui

Yusra Medical & Dental College, Islamabad

**Purpose:** To share the experience of development and implementation of research oriented program of 4th Year MBBS students at Yusra Medical & Dental College, Islamabad

**Methods:** The 12-weeks well coordinated and coherent Research Oriented Program for 4th Year MBBS students has been developed and implemented. Initially a series of lectures and workshops were arranged on various aspects of research methodology. The whole class was divided into 10 small batches and each batch was allocated a supervisor and research topic; research question was finalized after discussion with the respective supervisors. These students worked as a team and conducted different task of community based research project e.g. questionnaire development, data collection, data analysis and finally the synopsis write up. Supervision was provided on each step of this process.

**Results:** At the end of 12 weeks 100% successful submission of synopsis revealed active learning and participation of the students towards this initiative. Some of the students presented their research nationally and internationally and won various prizes. Feedback taken from the students was very encouraging and majority of them rated this approach of learning very high as it was 'situated' in a real world environment, enhanced by social interaction and collaboration.

**Conclusions:** It is evident from the research that experiential learning enhances student's interest and motivation towards learning and the best way to teaching is learning by doing.

**Keywords:** Community-based Medical Education, Community Context, Research Oriented Program

## EFFECTIVENESS OF INTERVENTION BY EDUCATION OF DOCTORS IN IMPROVING THE REFERRAL RATE AND QUALITY IN PRIMARY HEALTH CARE SETTING

Naila Azam

Primary Health Care Center, Karachi

**Purpose:** To determine the effectiveness of intervention by education of doctors in improving the referral rate and quality in a public sector health care setting.

**Methods:** Quasi experimental study at a health care setup in naval sailors' residential estate (SRE) at KARSAZ Karachi. Two continued medical education awareness sessions conducted three months apart by the two primary specialty consultants (gynecologists and pediatrician) at PNS RAHAT. The sessions aimed at communicating the consultant practice to 10 female general practitioners employed at the two family welfare centers (FWCs). Duration of the study was from March to September 2012.

**Results:** Data analysis with regards to the operational definition of improvement in referral pattern reflected by the change in statistics of the two departments in selected parameters. In child OPD there was 50% reduction in referrals to child OPD for acute gastroenteritis and fever of unknown origin. In gynecology OPD, 30% reduction in referrals for severe anemia (both during 2nd and 3rd trimesters) and an increase in referrals for high risk cases indicating better counseling and case identification. Improved standard of counseling was also reflected by 31% reduced referrals for hyperemesis gravidarum during first trimester.

**Conclusions:** The health care system can function optimally with focus on referral standards and by improving the communication between the primary care physicians and consultants.

**Keywords:** Healthcare system, Referral Quality, Continued Medical Education, Communication



## RETENTION AND CLINICAL APPLICATION OF BASIC SCIENCES BY STUDENTS DURING CLINICAL CLERKSHIP

Syed Inamullah Shah

Fauji Foundation Hospital, Rawalpindi

**Purpose:** While memory decrement studies have been conducted in the past, this study also attempts to compare knowledge retention with clinical application ability of final year students.

**Methods:** Students starting their final year surgery clerkship in a private sector institution in Jan 2015 were asked to take a paper composed of two sections of MCQs. First section contained MCQs from end of year exam 2012 (anatomy and physiology) and 2013 (pathology) of same students. Second section contained clinically relevant questions of anatomy, physiology and pathology. Paired samples t-test was applied to compare the re-test score with 2012-13 exam scores. Re-test score was also compared with clinical application test score.

**Results:** A statistically significant drop in scores was recorded in re-test of basic sciences ( $p = .006$ ). There was 26.8% drop in anatomy, 27.2% in physiology and 39.8% drop in pathology scores with an overall drop in the basic sciences score by 32.7%. Clinical application score of this retained knowledge was 21.7% lesser with a mean of 39.8% (SD=10). T-test showed a significant difference in the retained knowledge and its clinical application ( $p = .000$ ).

**Conclusions:** Students had lost a significant amount of knowledge over a period of 2 to 3 years with maximum loss in pathology. More important is the fact that they were very weak in transferring this retained knowledge to clinical application. This has implications for curriculum revision in basic science courses.

**Keywords:** Basic sciences; Retention; Clinical application; Medical students.

## LEARNING HOW TO PROVIDE FEEDBACK TO MEDICAL TRAINEES IS ESSENTIAL FOR FACULTY DEVELOPMENT

Asim Mahmood

Wayne State University, Henry Ford Hospital, Detroit, USA

**Purpose:** We will present guidelines for how to provide effective feedback to medical trainees.

**Methods:** We examined basic feedback tools and selected those which are most suitable for the medical trainees in developing countries. We reviewed our own experiences over the last three decades and supplemented it with online research to develop guidelines for providing an effective feedback.

**Results:** Our guidelines demonstrate that effective feedback should be timely and specific. It should include careful listening, skilled questioning, critical thinking, as well as involve personal understanding. It should be content specific. It should be positive as well as negative; should be confirmative as well constructive. Negative feedback should not be synonymous with criticism. It should not simply include giving the feedback, but also how the trainee perceives it. The person providing the feedback should be an expert listener and entertain strong and pointed questions.

**Conclusion:** In medical setting feedback is one of the most valuable, however, most misused and most misunderstood learning tool. The faculty should be well equipped with effective feedback tools to help the medical trainees progress in their academic and professional pursuits. Our guidelines are an endeavor to assist the faculty in resolving some of the difficulties encountered in providing feedback.

**Keywords:** Feedback, Faculty, Constructive, Confirmative

## COMPARISON OF THE OBJECTIVE STRUCTURED CLINICAL EXAMINATION SCORES OF STUDENTS WITH AND WITHOUT A STRUCTURED INTEGRATED CLINICAL SKILLS LABORATORY CURRICULUM

Naushaba Sadiq

Foundation University Medical College, Islamabad

**Purpose:** This study was conducted to evaluate the impact of structured integrated curriculum on student's performance in clinical skills laboratory.

**Methods:** End of the module objective structured clinical skills laboratory examination was conducted for the students who utilized structured integrated curriculum. The results were compared with end of module examination of students of previous year who had undergone an unstructured curriculum. The modules under study were same for both the years. The number of stations, duration, variables to be examined, checklist and qualification of the examiners was same as that of previous year. OSCE scores of both years were computed as means with standard deviations. Cronbach's alpha was calculated for the reliability of scores. Independent sample t-test was used to determine the differences in the mean score. P-value less than 0.05 (two sided) was considered statistically significant for this study

**Results:** Cronbach's alpha calculated for the reliability of scores was 0.65 for group A and for group B It was 0.52. The comparison of individual station showed significant difference among the scores of two groups of students reflecting improved performance of student's undergone structured curriculum. Comparison of various components of examination by ANOVA test also reflected significant difference between groups.

**Conclusions:** The results of study indicated that the students who had utilized integrated structured clinical skills laboratory curriculum had improved performance in end of module OSCE. It is concluded that to enhance the value of clinical skills training and to make it more effective, skill lab curriculum must be structured and integrated.

**Keywords:** Clinical Skill Lab, Structured Curriculum, Objective Structured Clinical Examination

## DOES FEEDBACK MAKE TEACHERS BETTER ROLE MODELS?

Tashfeen Ahmad

Aga Khan University, Karachi

**Purpose:** To determine whether feedback regarding trainees' perceptions of teachers as role models makes the teachers better role models.

**Methods:** An anonymous electronic survey was administered to 10 Orthopaedic residents asking them to rate their 6 faculty members on attributes of role modeling after institutional ethics approval and consent from both faculty members and residents. Pooled results of this survey were compiled by an independent person and sent to the respective faculty members in tabulated form of their own scores and group average. The process was repeated next year and the results compared.

**Results:** There was an increase of 2% in overall rating as role model (standard of excellence to be imitated) and increase of 1% in combined score of all attributes, but these trends were not significant. Among the three domains of role modeling there was no significant change although teaching skills showed a 4% increasing trend ( $p=0.066$ ). In clinical competence there was 5% increase in effective communication ( $p=0.02$ ), in teaching skills there 7% increase in being explicit about what is modeled ( $p=0.02$ ) and 4% in providing timely feedback ( $p=0.002$ ), while in personal qualities the greatest increase was in collegiality, 11% ( $p=0.027$ ). Both residents and faculty members considered such feedback useful.

**Conclusions:** The results indicate that even though there was no significant increase in the overall perception as a role model, significant changes were seen in specific components of role modeling. This method of teacher assessment and feedback appears to be acceptable and useful in modifying attributes which project teachers as role models.

**Keywords:** Teaching, Learning, Medical Education, Role Modeling, Mentor ship

## PRIORITIZING MEDICAL EDUCATION RESEARCH IN PAKISTAN

Tanzeela Khalid

The University of Faisalabad, Faisalabad

**Purpose:** To identify the priority areas in educational research in Pakistan, in the context of Medical Education.

**Methods:** A combination of nominal group discussion followed by modified Delphi technique was used. Participants were Medical Educators currently involved in teaching practices and/or in leadership roles. Nominal group discussion was carried out with experts from the field of health professions education to identify and rank the research areas. The results were then shared with experts throughout the country via e mail. They were requested to order the 11 identified areas according to their perceived priority.

**Results:** The identified areas include 1. Challenges and opportunities for DME 2. Current teaching and learning practices 3. Quality assurance in undergraduate and post graduate, CPD, and allied health programs 4. Bridging gap between theory and practice 5. Systematic reviews of published research in Pakistan 6. curriculum 7. student selection 8. social accountability 9. professionalism 10. student support and career counseling 11. Health policy and practice

**Conclusions:** 11 priority research areas have been identified. Future research in the field of health professions education should focus on these areas

**Keywords:** Educational Research, Health Professions, Medical Education, Research Areas

## FACULTY DEVELOPMENT EXPERIENCE IN MENTORING SYSTEM

Seyyedha Abbas

Foundation University Medical College, Islamabad

**Purpose:** To evaluate the impact of mentoring workshop, identify the factors which are important for the implementation of a successful mentoring program and identify the resources and administrative support required for the mentoring program.

**Methods:** This study was conducted in Foundation University Medical College. It was a descriptive and analytical study. The total number of participants (faculty members) was 30. The data collection tools were pre and post test, focus group discussions and feedback proforma. The data was analyzed through SPSS version 17.

**Results:** The participants got 33% percent in pre test and 92% in post test, showing a significant difference in pre and post test results. The focus group discussion was the most informative session, which gave the information about previous faculty experience and also proposed a remarkable plan for reframing the mentoring program. Feedback proforma received from faculty after one month of working showed increased motivation, confidence building and self satisfaction; they also highlighted significant improvement in improved academic output and trust level of students. The faculty members also appreciated continuous support by administration as well as senior faculty.

**Conclusions:** Faculty development workshop provides a platform to the faculty who were facing the problems with mentoring program and they were more responsive towards the development of effective program. So blend of faculty motivation and opportunity of faculty training made the mentoring program a success.

**Keywords:** Mentoring, Faculty Development, Integrated Teaching, Workshop

## POINT OF CARE TESTING: AN EFFECTIVE APPROACH TO DEVELOP SOCIAL RESPONSIBILITY AND ADDRESS IRON DEFICIENCY ANEMIA IN WOMEN AND CHILDREN OF RURAL PAKISTAN

Rukhsana Ayub<sup>1</sup>, Faisal Aziz, Lara Motta, Brooke Spaeth, Anne Shephard, Mark Shephard

<sup>1</sup>Al-Nafees Medical College, Islamabad

**Purpose:** To educate women and children about causes, effects and prevention of IDA; to develop social responsibility in undergraduate medical students; and to develop a community-based POCT model for detecting IDA.

**Methods:** Twenty two students and four community workers learned about IDA and received online training on quality-assured POC Hb testing on the HemoCue 301 by Flinders International POCT via video conference. They tested Hb of women and children and educated them about IDA either at health facility or door-step. Patients identified with IDA were given immediate treatment. Students developed a health education campaign. Knowledge of women and social responsibility in students was compared before and after interventions via rater scales. A quality control program was implemented to monitor the analytical quality of field Hb testing. Focused group discussions (FGD) were conducted for students.

**Results:** During March April, 2014, 122 women and 36 children were tested for Hb and educated about IDA. Health education was imparted through 10 group sessions and 474 individual sessions with 3 sessions/ participant. The prevalence for anaemia (Hb < 12 g/dl) in women and children were 52% and 48% respectively. The knowledge of women and civic responsibility in students increased substantially after interventions. The four HemoCue devices used exhibited sound analytical field performance (between-device imprecision for Hb 1.7% and 1.3% for the two control materials tested (n= 32).

**Conclusions:** The social responsibility of students increased significantly through SL. The POCT improved access of women and children to Hb testing and ensured timely management of IDA.

**Key Words:** Iron Deficiency Anemia, Haemoglobin, POCT Model

## SIMULATION AND ITS ROLE IN LAPAROSCOPIC SURGICAL TRAINING

Huma Sabir Khan

Services Hospital Lahore

**Purpose:** To Share Our Experience Of Use Of Box Simulators As A Tool To Improve Laparoscopic Training In Surgical Residents.

**Methods:** This study was carried out at Services Hospital Lahore from January 2014 to Dec 2014. It was an observational retrospective study carried out by taking feedback from participants in the form of questionnaires. Study population involved the surgical residents who have attended laparoscopic simulator workshops in learning resource centre at Services Institute of Medical Sciences Lahore. Their views about their performance before and after the workshops and experience on object models verses cadaveric animal models were asked. Results were analyzed using SPSS version 22.

**Results:** A total of 30 residents participated in the basic laparoscopic skills workshops. 96 % found the workshops very useful for the basic laparoscopic skills acquisition. 93% responded that the workshop has increased their dexterity, confidence and improved performance. Among 30 residents 10 residents participated in the basic and advanced laparoscopic skills workshop on cadaveric animal models. All the residents 100 % thought that cadaveric models help create more real environment and helped in better and safe skills acquisition and testing.

**Conclusions:** laparoscopic simulator training helps improve skill acquisition and testing. Simulator training on cadaveric models is superior to object models especially for advanced laparoscopic skills.

**Keywords:** Laparoscopic Simulators, Surgical Trainee, Cadaveric Models

## INTEGRATION OF NATIONAL GUIDELINES IN PAEDIATRICS CURRICULUM

M. Akbar Nizamani

Liaquat University of Medical & Health Sciences, Jamshoro

**Purpose:** There is a need to address problems like high infant and neonatal mortality rate, high maternal & perinatal mortality rate, high rate of infectious diseases, poor immunization coverage, non optimum breast feeding, high ratio of malnutrition that are not addressed in standard text books. Teaching methodologies applied are not innovative

**Methods:** Development of teaching tools at LUMHS, revisiting pediatric curriculum at LUMHS for 4th year and final year MBBS started in 2010. Teaching process for pre-Service IMNCI was evaluated by 5 international members of WHO-EMRO region who validated the process on an evidence based model. More quality assurance tools like updating Log book, teacher's manual with lesson plans and students hand book containing national guidelines were done in 2013. Evaluation process was also revised and whole process was approved by university academic council.

**Results:** More than 80% students are now able to correctly assess the common problems in children and perform life saving procedures like Newborn Resuscitation.

**Conclusions:** Revisiting paediatrics curriculum and integration of national guidelines in undergraduate curriculum improves the quality of managing common paediatrics problems by future doctors. This will save enormous cost in service training of doctors.

**Keywords:** Curriculum, Paediatrics Curriculum, National Guidelines

## AWARENESS ABOUT SIGNIFICANCE AND METHOD OF RESEARCH PAPER WRITING (RPW) IN MEDICAL AND PHARMACY STUDENTS

Huda Kafael

Jinnah University For Women, Nazimabad

**Purpose:** The objective of the study was to assess the attitude and level of awareness of medical and pharmacy students towards research paper writing (RPW) and also to evaluate the major factors behind lack of awareness about the significance and accurate method of RPW.

**Methods:** A questionnaire that was distributed among students of MBBS and Pharm.D (3rd – final year) in different private and government sector universities in Karachi having close ended questions related to their knowledge about RPW with respect to their interest towards higher studies.

**Results:** Overall, 65% of students returned the questionnaire divided irrespective of gender. In a sample of 140 students 7.143% responded that they have no knowledge about RPW. (rated as "0"). A total of 92.9% in a sample of 140 were found aware up to some extent. Upon evaluation of reasons behind lack of awareness the major reason 59% in opinion of students was lack of contents highlighting significance and correct method of RPW in current curriculum.

**Conclusions:** In the fast era of technology and science to research and document your work has become mandatory and knowledge of RPW should be incorporated in students during their academic career to avoid inconvenience, unnecessary anxiety during higher studies and also to contribute in the field of science.

**Keywords:** Research, Manuscript, SPSS, Awareness, Endnote

## DISRUPTIVE OR ENHANCING TOWARDS LEARNING? VIEWS & PERCEPTIONS OF UNDERGRADUATE MEDICAL STUDENTS

Rizwan Hashim, Sanobar Hameed, Aisha Ayyub, Salman Ali

Army Medical College, National University of Sciences and Technology, Rawalpindi

**Purpose:** To describe the perceptions & behaviors of undergraduate medical students regarding the use of internet.

**Methodology:** Cross-sectional descriptive study carried out at Army Medical College, NUST, Islamabad, from January 2014 to June 2014. Data had been obtained from volunteer undergraduate medical students who were computer literate and were using the internet facility. A structured questionnaire was used which included following items: duration and frequency of internet use, impact of internet use on academic grades, influence of internet usage on relationships with friends and family, effect of overuse on sleep cycle and having the self-knowledge of being internet addicted.

**Results:** Two hundred and twelve students gave consent to participate in this study. Different perceptions of undergraduate medical students regarding the internet use were observed: 64(30.2%) students spent about two hours daily in internet surfing and 79(37.3%) participants in our study utilized internet facility for social networking while 67(31.6%) used it for educational and learning purposes. 147(69.3%) participants reported that internet use enhanced their learning and had a positive effect on their academic grades.

**Conclusion:** Our study concludes that internet-using skill is a very powerful tool in today's world with regards to academic learning. With appropriate guidance and support, students can get maximum benefit from this facility and can enhance their learning capabilities.

**Keywords:** Students, Medical Education, Internet.

## TYPE A AND TYPE B PERSONALITY AMONG UNDERGRADUATE MEDICAL STUDENTS: NEED FOR PSYCHOSOCIAL REHABILITATION

Aliya Hisam

Army Medical College, National University of Sciences and Technology, Rawalpindi

**Purpose:** The purpose of our study was to find out the numbers of type A personality (TAP) in undergraduate medical students (UGMS).

**Methods:** A comparative cross sectional study was conducted at Undergraduate Medical College, Rawalpindi from Sept. 2012 till Feb. 2013. Among 500 sample size, 100 students from each MBBS year were inducted by probability systematic sampling technique. After taking consent from the institute and students, data was collected on BECK anxiety inventory (BAI) questionnaire. According to BAI scale, students were identified as Type A or B personality.

**Results:** First, second, third, fourth and final year students had 5 (1%), 6 (1.2%), 11 (2.2%), 13 (2.6%) and 19 (3.8%) type A personality students respectively. Among all the study participants (n=500), total number of type A was 54 (10.8%) and type B personality students were 446 (89.2%). Type A personality was 29 (11.6%) in female students (n=250) and 25 (10%) in male students (n=250). Association between student year and personality type was significant (p=0.010) at 95% confidence level.

**Conclusions:** Type A personality students existed in every year of medical students and there was a gradual increase in the number of type A personality students from 1st year to final year MBBS. Frequency of type A personality was seen more in female students as compared to the males.

**Keywords:** Medical, Students, Personality Disorder

## DRUGS, DOCTORS AND DINNERS: NEED OF REGULATIONS OF PHYSICIAN-PHARMACEUTICAL INTERACTION

Ghulam Murtaza Gondal

Foundation University Medical College, Islamabad.

**Purpose:** To assess the opinions and practice patterns of young postgraduate trainees on acceptance and use of free drug samples and other incentive items from pharmaceutical representatives.

**Methods:** A questionnaire was given to postgraduate trainees of various departments of Fauji Foundation Hospital Rawalpindi between 1st to 31st December 2014 who returned the proforma without showing their identity.

**Results:** The response rate was 95%. Most respondents thought it proper to accept drug samples (87%), an informational lunch or dinner (48%) or one to one meeting with the pharmaceutical representatives (55%). A third (33%) of the respondents thought that their own decision to prescribe a drug would probably be influenced by accepting drug samples. Respondents who distributed drug samples to patients indicated that it is because of patients' financial need (94%) and for their convenience (76%) and less so as a result of knowledge of the efficacy of the sample product (63%). Almost half (48%) of respondents agreed that interactions with industry should be more strictly regulated.

**Conclusions:** Young doctors largely indicated that they should act in accordance with what they think is proper regarding accepting incentive items from pharmaceutical representatives. Although accepting free drug samples was considered to be appropriate more often than any other item, free drug samples were most commonly judged to be influential on prescribing practice.

**Keywords:** Doctors, Pharmaceutical Representatives, Drug Samples

## ROLE OF UNSEEN PRETEST FORMATIVE ASSESSMENT IN IMPROVING CLINICAL INTEREST AND FINAL SCORES OF FINAL YEAR STUDENTS

Azra Saeed Awan

Islamic International Medical College, Riphah International University, Rawalpindi

**Purpose:** To evaluate the role of unseen pretest formative assessment in improving clinical interest and final scores of final year students

**Methods:** Final year medical students, in their fourth year of clinical work were divided into two groups just in the beginning. In addition to the usual clinical material, group A were provided with unseen pre-course assessment material. The B group was provided with study guide of pre-course assessment. The result was only conveyed as feedback paper. Their interest in clinical work and their performance was compared in two groups' methods at the end of their gynecological module and at final professional exams. Observational and quantitative study

**Results:** The performance of students of group A was far better than group B.

**Conclusions:** Formative Pretest assessment is a new tool used for the first time in clerkship and proves to be very effective in improving clinical performance in the form of interest and final scoring. Key point is to prepare goal directed pretest.

**Keywords:** Pretest, Formative Assessment, Unseen Pretest.

## FACULTY DEVELOPMENT THROUGH STRUCTURED MEETINGS: PERCEPTION OF TEACHERS OF UNDERGRADUATE MEDICAL COLLEGE

Shazia Babar

Aga Khan University Hospital, Karachi

**Purpose:** To determine the perception of teachers about faculty development through structured meetings

**Methods:** The observational cross sectional study was conducted at Bahria University Medical & Dental College from October 2010 to March 2011. Feed back of all faculty members of university was acquired on weekly structured meeting (with alternating theme of journal club and problem based scenario presentation) by a self reported questionnaire. The responses obtained on a 5-point Likert scale were divided into two groups; I, senior faculty (professors, associates and assistants) II, junior faculty (lecturers). Chi square test was applied to compare categorical variables and results considered significant with  $p$  value  $< 0.05$ .

**Results:** Forty nine faculty members; 15 in Group I and 34 in Group II responded, 90% respondent considered it to be a healthy activity. Senior faculty agreed to the usefulness of structured meetings in terms of faculty development, social interaction, provision of learning opportunities, upgrading of presentation, communication, listening and critical appraisal skills, understanding of biostatistics, self awareness, personal productivity and tolerance to listen to criticism more than the junior faculty ( $p$ -value 0.000).

**Conclusions:** The perception regarding weekly structured meeting indicated that it enhanced faculty's development in presentation skills, confidence, positive attitudes and promoted educational leadership qualities in them through interaction and dialogue

**Keywords:** Structured Meeting, Faculty Development, Likert Scale

## EDUCATION DEVELOPMENT NEEDS OF HEALTH PROFESSIONS FACULTY IN PAKISTAN

Azam S. Afzal

Aga Khan University, Karachi

**Purpose:** The research question of this study aims to find answers to: What number of medical teachers are interested in faculty development? What are the areas of development that medical teachers in Pakistan identify? How do these needs vary with demographics? How can technology enhanced education activities support faculty development in Pakistan?

**Methods:** The design of the study was a cross-sectional survey of medical colleges faculty in Pakistan. Study participants were chosen at random from medical colleges' faculties within Pakistan. The data for this study was collected by having medical/nursing teachers filling an online questionnaire. Calculation based on sample population revealed a sample size of 282 is required to achieve statistically significant results with a 5% margin of error and confidence level of 95%.

**Results:** Preliminary results revealed that majority of the participants were women (55%) and were faculty from private medical colleges (58%) The main barriers to faculty from attending capacity development programs were lack of: protected time (67%), funding (48%), scheduled educational activities (42%). Most respondents had attended some form of on-line faculty development activity (61%) and most found them helpful (71%).

**Conclusions:** This study aims to identify faculty development needs in Pakistani medical colleges. This study will help in planning health professions education related faculty development initiatives in Pakistani medical colleges.

**Keywords:** Capacity Building, Faculty Development, Health Professions Education.



## ATTRIBUTION'S OF FIRST PROFESSIONAL MEDICAL STUDENTS' ABOUT THEIR ACADEMIC FAILURE & INTERVENTIONS TO IMPROVE THEIR ACADEMIC PERFORMANCE AT YUSRA MEDICAL & DENTAL COLLEGE, ISLAMABAD

Farah Rashid Siddiqui

Yusra Medical & Dental College, Islamabad

**Purpose:** The purpose of this research is to explore the attributions of first professional supplementary medical students towards their academic failure and to determine the effectiveness of attribution retaining and feedback interventions

**Methods:** The methodology used is Mixed Method Research. Total 73 medical students of 1st -3rd year MBBS recruited through random sampling at YMDC during 2014. Face to face in depth interviews of the supplementary first professional II students were conducted and audio taped with the informed consent followed by Quasi experimental study. The same students received the attributional retraining and feedback interventions and 3rd year supplementary students acted as control. The main outcome variable was pass or fail result of supplementary examination on the basis of which the effectiveness of these interventions was assessed.

**Results:** Total number of students who participated in study was 73; out of which 32 from first professional-II and 41 from second professional. Majority of the student (68%) attributed their failure to internal factors. The rate of success in overcoming academic failure is higher (93%) in interventional group compared to control group (75%), on application of Mann-Whitney U Test these findings turned out statistically significant ( $p=0.001$ ).

**Conclusions:** Attribution retaining and feedback interventions are effective in assisting students to improve their academic performance and overcome failure.

**Keywords:** Attribution Retaining, Feedback, Academic Performance, Student Failure

## STUDENTS' PERCEPTION OF SURGICAL OBJECTIVE STRUCTURED CLINICAL EXAMINATION (OSCE) AT DOW UNIVERSITY OF HEALTH SCIENCES

Zubia Masood

Ziauddin Medical University, Karachi

**Purpose:** To determine the student's perception of reliability and validity of Surgical Objective Structured Clinical Examination (OSCE) in Dow University of Health Sciences.

**Methods:** Total 109 third year students of Dow International Medical College voluntarily and anonymously completed a self-administered questionnaire at the end of the OSCE examination from January 2012 to March 2013. Main outcome measures were student perception of examination attributes (which included the quality of instructions and organization, the quality of performance, authenticity and transparency of the process).

**Results:** OSCE was considered as a fair examination method by 76% students. More than half of the students rated this examination as one covering wide range of knowledge (86%), clinical competence (72.5%), and well administered and structured (85-87%). Sixty six percent students highlighted OSCE as tool that is reliable and valid in measuring their clinical competencies

**Conclusions:** OSCE as a tool to evaluate clinical competence among surgical students was highly appreciated by the students. Student believes that this assessment method cover broad knowledge component and clinical competence

**Keywords:** Assessment, Objective Structured Clinical Examination, Perceptions, Surgery

## ARE SMARTPHONE HELPING MEDICAL STUDENTS OR NOT IN THEIR EDUCATION

Jehanzaib shah, Usman Haq

Rawal institute of Health Sciences, Islamabad

**Purpose:** The aims of the study were to identify the extent to which junior doctors and medical students use smart phones to enhance their clinical activities.

**Methods:** The study was questionnaire based descriptive cross sectional study conducted among medical students in Rawal Institute of Health Sciences. The questionnaire was constructed by the lead researcher and was reviewed by an expert panel for content validity and reliability.

**Results:** The study was conducted on a total of 569 medical students and professors. 226(39.7%) of the smart phone users were using any medical apps and 338(59.4%) were just using their phones for telecommunication and social networking. 70.8% were not using any type of medical text books through their phone and only 28.3% had relevant text books in their phones. 63.7% of the population thought it is necessary for the medical professionals and students to have smart phone with medical app 36.3% thought otherwise. 42.5% believed that medical apps are comparable to books. 137(24.08%) were aware of the medical apps but still were not using them. 528 out of 545 people had internet on their phones. 304(53.43%) had availability to the internet but still were not using any type of medical information from their phones.

**Conclusions:** We concluded from this study that smart phone are still being used as a means of telecommunication rather than a gadget for improving medical knowledge and skill.

**Keywords:** Smart Phones, Medical Apps, Medical Students

## PREVALENCE OF NON-COMMUNICABLE DISEASES AND THEIR RISK FACTORS AT NURPUR SHAHAN ISLAMABAD

Sajida Naseem

Shifa College of Medicine, Shifa Tameer-e-Millat University, Islamabad

**Purpose:** To estimate the burden of non-communicable diseases in an urban setting,

**Methods:** A community based cross sectional survey covering 500 households was carried out over a period of three months 2013. Households were selected through consecutive non-probability sampling, among which adult females were interviewed through a structured questionnaire in urdu language. Data analysis was done by using spss version 21.

**Results:** Results of the study showed that 38.3% individuals had High BP / IHD, 14.5% had DM, 4.6% had stroke, 34.3% had oro-dental health problems, 10.4% had goiter, 4% were having psychiatric disorders, 2.6% had committed DSH, 24.3% were physically disabled while 1.8% were mentally disabled, 1% had cancer. Among the risk factors, 43.8% were cigarette smokers, 4% hukka consumers, while 1.7% drinks alcohol.

**Conclusions:** We conclude that the prevalence of non-communicable diseases is quite high in the above setting as compared to the National indicators, which demands timely intervention to curtail the existing burden of NCD's.

**Keywords:** Non-Communicable Diseases, Prevalence, Risk Factors

## STUDENT'S SATISFACTION; COMBINING INTEGRATED MODULAR SYSTEM WITH TRADITIONAL TEACHING METHODS

Aamna Khalil

Rawal Institute of Health Sciences, Islamabad

**Purpose:** The aim of this study was to analyze the student's perceptive regarding the integrated modular system.

**Methods:** The study was conducted at a private medical college (Rawal Institute of Health Sciences, Islamabad) as a descriptive analysis. The first year MBBS class of 2014 was introduced with a hybrid manner of teaching combining the traditional teaching methods with problem based learning in a modular fashion. After 12 weeks of teaching first module assessment was conducted. A self-designed questionnaire about the modular content and teaching methodology was given to each of the 102 students after taking consent.

**Results:** Majority of the students (98%) responded. Regarding objectives students agreed that they were clearly stated (90%) and that assessment was based on these objectives (76%). The modular content was interesting (81%), manageable (68%), in logical sequence (83%), depth of knowledge was appropriate (71%), theory was integrated with practice (74%); subject of biochemistry was stated as the difficult subject (67%). The teachers were well prepared (90%), interactive teaching methods helped in learning (71%), small group discussion was preferred teaching method (41%). Regarding learning resources; sufficient resources were available (57%), handbooks were helpful (78%), e-learning social network was required (76%) and library was identified as the best place for self study (73%).

**Conclusions:** The students were satisfied with the teaching methods specially PBL and the learning environment.

**Keywords:** PBL, Integrated Modular System, E-learning Social Networks.

## IS CADAVERIC DISSECTION A THING OF THE PAST? INSIGHT OF CONSULTANT, FELLOWS AND RESIDENTS

Haider Ghazanfar

Shifa International Hospital, Islamabad

**Purpose:** Aim of our study was to assess the perception of Consultant, Residents and fellows about Cadaveric Dissection and whether it can be replaced by alternative teaching techniques.

**Methods:** We performed a cross sectional study on Consultants, fellow and residents using a self-constructed questionnaire comprising of 41 items; of which 8 items were about demographics, 16 items were on perception about Cadaveric Dissection and 17 items were about teaching aims.

**Results:** Models and Cadaveric Dissection were thought to be the most effective method of teaching anatomy by 66.6 % doctors. According to 33.3% doctor's cadaveric Dissection cannot be replaced by other alternative teaching method. None of the doctors thought that cadaveric dissection is a waste of time. About 41.7% doctor thought that it's imperative for every doctor to do cadaveric Dissection. There was no statistical difference ( $p$ -value $>0.05$ ) between opinion of doctors of Surgery & Allied and Medical & Allied specialties. Cadaveric Dissection had the highest mean teaching aims score of 3.62 (SD 0.86392) while didactic teaching had the lowest mean teaching aim score of 2.68(SD 0.912).

**Conclusions:** Most doctors considered dissection and models as the most effective methods of teaching anatomy. Thus cadaveric dissection cannot be replaced by alternative teaching methods

**Keywords:** Dissection, Prosection, Cadaver, Education, Medical

## EFFECT OF NON-ACADEMIC VARIABLES (GENDER AND PREVIOUS SYSTEM OF EDUCATION, HSCE/GCE) ON MEDICAL STUDENTS SCORE

Saba Tariq

University Medical and Dental College, Faisalabad

**Purpose:** The present study was designed to explore the effect of non-academic variables (gender and previous system of education, HSCE/GCE) on academic performance of medical students.

**Methods:** This analytical study was carried out at the Department of Biochemistry, Bahria University Medical and Dental College, Karachi, in the year of 2011, with 97 students of second year MBBS. We gender-wise compared the scores obtained in module I and module VI and also compared student's scores according to the educational background (general certificate examination (GCE) vs higher secondary certificate examination (HSCE) system.

**Results:** Girls 'students' obtained significantly higher marks in first and sixth module exams in SEQs, OSPE, and in overall score, as compared to boys. Girls' students' also obtained higher marks in VIVA in both modules but it was significant in sixth module only. The students of GCE background obtained significantly higher marks in SEQs, VIVA, total marks in practical and overall score in sixth module as compared to HSCE system while no significant difference observed in first module. GCE (A-level) students' pass percentage was significantly higher than the HSCE students in module I in MCQs, total theory marks, VIVA, total practical marks and in overall score

**Conclusions:** Our results show that girls' students' and students having GCE background performed well in different component of the assessment tools.

**Keywords:** Gender, HSCE, GCE, Academic Performance

## HEALTH SEEKING BEHAVIOURS AMONG ELDERLY COMMUNITY WOMEN AND FACTORS INFLUENCING IT: A MIXED METHOD STUDY

Iram Yasir, Rukhsana Aslam, Maryam Khan

Al-Nafees Medical College, Isra University, Islamabad

**Purpose:** To find out the factors effecting poor women health.

**Methodology:** It was a mixed study design with quantitative component complemented with qualitative component. 73 respondents were enrolled. 13 interviews were conducted. Respondents were selected by simple random sampling.

**Results:** Majority of the respondents were in the age group 56-65. Mean age was  $53 \pm 10.24$ . Majority of the respondents were illiterate 58(79.4%), 13(17.80%) were primary pass and 2(2.74%) were above Matric. 18(24.65%) respondents told that they are healthy while 55(75.34%) told that they are unhealthy. 50(68.5%) responded that they are taking some sort of medication while 23(31.50) responded that they are not taking any sort of medicine.

In in-depth interviews almost all the respondents described themselves as sick and weak and unable to carry out routine activities. According to most of the respondents, they utilized allopathic mode of treatment. Affordability came out to be the most common barrier for health seeking among study population. When compliance to treatment was enquired, some of the respondents were complying with the treatment while others were not.

**Conclusion:** The effects of ageing, low economic status and inadequate access to health care contributed to the elderly women poor health status. There is a need for launching services that provides forum which could highlight and advocate the issued face by elderly women.

**Keywords:** Health-Seeking Behaviour, Elderly People, Pakistan

## PERCEPTIONS, ATTITUDES AND PRACTICES ABOUT REPRODUCTIVE HEALTH AMONG YOUNG FEMALES IN FAISALABAD DISTRICT, PAKISTAN

Muhammad Ali Tarar

Ghazi University, Dera Ghazi Khan

**Background:** Reproductive health is concerned with the people's ability to have a satisfying and safe sex life ensuring their capability to reproduce with a liberty of making a decision that if, when and how often they have to do so. In Pakistan, culturally females are married in young age; become mother and are at risk of health complications i.e. HIV/ STD and STI. There is less utilization of reproductive health services throughout Pakistan that ultimately affect health status of people at very young age. Most of the communities are not aware of reproductive health services, thus not availing these facilities. So the present study was designed to examine the females perceptions, attitude and practices about reproductive health services as well as to determine the level of their empowerment to take decisions and make choices regarding their own reproductive health besides determining the level of the quality, availability and accessibility of reproductive health services and to suggest some measures for policy makers to improve the reproductive health state of young mothers in district Faisalabad.

**Methods:** A sample of 600 young married females of age 15-32 years were selected through multistage sampling technique from eight town of Faisalabad District.

**Results:** Most (44.0%) of the respondents belonged to age category of 26-30 years; 35.5% were married up to 18 years; 39.3% had passed up to 5 years marriage duration; 71.8% had primary and above level of education. Majority (65.9%) had up to Rs. 10,000 per month income, 49.2% possessed 6-10 family members, 73.5% beard at least 2 and above live children, 74.0% perceived family planning good, 79.7% had knowledge of FP and 26.0% practiced FPM. The most common FPMs were condom (33.3%) and tubectomy (21.8%) while 41.0% faced side effect because of FPM during their reproductive life. A huge majority (79.8%) of the respondents received ANC, 87.8% made regular visits for medical checkup and 48.8% got ANC from Pvt. Hospital during last pregnancy. Bi-variate analysis showed highly significant relation among age at marriage, awareness level, monthly income, education, number of pregnancies, number of children, number of visits to medical centre, availability of RH services, cultural hindrance and age of respondents vs. their reproductive health.

**Keywords:** Attitude, Contraceptive Practice, Reproductive health Knowledge, young Females

## A SOCIOLOGICAL STUDY ABOUT THE ADOPTION OF CONTRACEPTION METHODS AND THEIR EFFECTS ON THE MARRIED FEMALES HEALTH IN RURAL AREAS OF TEHSIL DERA GHAZI KHAN

Iram Khan

Ghazi University, Dera Ghazi Khan

**Background:** Population is growing rapidly in Pakistan and it is very difficult for the state to provide basic necessities like food, housing, health and education to all the people. In the past, adoption of family planning has been neglected by Government of Pakistan due to lack of services, awareness, education, traditional beliefs, employment and misconception. Mostly people think that the use of contraception methods is against the nature and Islam and is also harmful for health. Now the promotion of family planning is the priority for the government of Pakistan to maintain balance between socio-economic growth, population growth and development. For balancing in this aspect the main thing is to control the population with adoption of contraception method. The aim of this study was to find out the utilization and side effects of contraception on the health of rural married females of Tehsil Dera Ghazi Khan.

**Method:** Multistage sampling technique was used for the selection of 160 respondents from Rural Areas of Tehsil Dera Ghazi Khan.

**Results:** The result showed that predominating age categories were less than 15 and 16-20 years, many of the respondents 45.6% were illiterate, and 46.9% were house wives while 28.8% of the respondents had above Rs. 44000 per month income whereas 55.6% percent had good mutual understandings. More than one fifth (26.2%) had 1-2 pregnancies, 59.4% had sometimes heard about contraceptive methods while 84.4% of the respondents had favorable attitude towards adoption of contraception methods. Whereas 58.1% had sometimes used contraceptive methods, most of the respondents 31.9% got information about contraceptive methods from relatives' independent decision. In adoption of different contraception methods during the life span respondents reported injections 60.6% spermicides 50.6%, withdrawal 6.2% adoption of herbs 5.7% and 44.38% had faced positive effects while 19.37% faced negative effects whereas 36.25% of the respondents had both type of effects (positive/negative) on their health after the adoption of FP methods during reproductive span. Bivariate statistical analysis showed positive relationship between desires of family size and utilization of contraception. There was a need to bring positive change in societal attitude for the utilization of family planning.

**Conclusions:** There is an urgent need to educate women about contraceptive methods. Family planning needs to be universally included in to routine antenatal clinic activities. Besides, improving formal female education is certain to raise the existing knowledge and also to dispel the prevailing misinformation and misperceptions about family planning methods. Providers must know how to communicate with clients such that they are facilitating care rather than just prescribing the family planning methods. There is also a need to review the national family planning program with particular emphasis on contraceptive needs of adolescents and to improve accessibility and availability of all family planning services. Strategies that make family planning services available, affordable and accessible for all people, and that offer a wider range of contraceptive methods will have that greatest.

**Keywords:** Contraceptives Knowledge, adoption, effects, rural females' health

## ACADEMIC CENTER OF THE RIO GRANDE DO SUL MEDICAL UNION IN BRAZIL: A SUCCESS HISTORY

Vinícius de Souza

UFCSA (Universidade Federal de Ciências da Saúde de Porto Alegre), Brazil

**Background:** The Academic Center of the Rio Grande do Sul Medical Union (NAS) was created in 2007, and it's the only Academic Center inside a Medical Union in all Latin America. It has over 700 members from all medical schools in the Rio Grande do Sul state, Brazil.

**Method:** The NAS provides courses and events aimed at encouraging student participation in the development of medical education, supporting, also, academic leagues of medicine in promoting awareness. It also promotes the "Trota Solidario". Through the development and promotion of scientific activities, NAS provides the integration of their students; also the students of the faculties of Porto Alegre and Canoas are members of the executive board.

**Results:** In 2014 were conducted many courses as: ECG Course, Laboratory Analysis Course, Medical Career Planning Course, Medical Specialties Course and a Radiology Basics Course. The Trota Solidario won the award Top Citizenship ABRH-RS in 2013 and in 2014 received the Human Being Award Oswaldo Checchia National ABRH-, in the form Sustainable Development and Social Responsibility / Citizen Organization, showing the great impact of this social event. In addition, in 2014, the Trota Solidário, held in various cities of RS, grossed 387 blood bags, benefiting 1,500 people, and 20 tons of donations sent to the Food Bank, reaching the record of over 100 tons of donations and 2000 blood bags since the beginning of the "Trota Solidário".

**Conclusions:** Collaborating with medical training and bringing students of the union scene and the reality of the world of work, the NAS enables the approach of students with medical reality in Brazil, expanding their knowledge.

**Keywords:** Medical Education, Medicine Students, Medical Reality

## PRE- AND POST TEST: FOR DETERMINING THE IMPACT OF BREAST IMAGING WORK SHOP

Shaista Afzal

Aga Khan University Hospital, Karachi

**Background:** Breast imaging holds a key position not only in breast cancer screening and diagnosis but also for staging and post treatment surveillance. There are not enough qualified radiologists to interpret breast imaging examinations or to perform diagnostic interventions. The availability of sufficient number of radiologist qualified to interpret mammography and perform other breast imaging is a concern for the health care community. Newly trained radiologist can play an important role in overcoming the staffing shortage. Dedicated courses in a simulated environment for enhancing knowledge and skills may provide an opportunity to learn and practice breast imaging in accordance to the international guidelines. The traditional pre test-post test method provided an easy and useful tool to evaluate, analyze and communicate a change in knowledge and understanding of participants and in demonstrating the outcome and impact of the course.

**Method:** The study was conducted in the department of Radiology at Aga Khan University hospital in August 2014. Participants attending the breast imaging workshop were included. There were two groups of participants, group I completed both the pre/post test. Group II attempted post test only. Participants attempted pre test, which was followed by dedicated lectures and hands-on experience. At the end post test was taken. Data was analyzed using matched pairs t-test.

**Results:** A total of 43 physicians participated. Out of the total participants 18 were consultants and 25 were trainees. Group I attempted both the pre/post test. The mean pretest score being 3.86 and post test score was 6.07. The mean post test score of group II was 5.13. The improvement of mean test score in group I was significant with p value of .003.

**Conclusions:** The breast imaging workshop enhanced the knowledge and skills of the participants as evident by the outcome of pre-post test analysis.

**Keywords:** Breast Imaging, Pretest-Post Test, Assessment

## ANOREXIA NERVOSA AMONG TEENAGE GIRLS: EMERGING OR PREVALENT?

Aliya Hisam

Army Medical College, National University of Sciences and Technology, Rawalpindi

**Background:** Anorexia can lead to a lot of secondary diseases and can hinder normal mental and physical growth of future generations according to many studies. Unfortunately very little work has been done in Pakistan regarding the prevalence of anorexia nervosa. We need to find out the burden of anorexia nervosa among the teenage girls and to assess the knowledge, attitude and practice of AN. Moreover we would also like to know if they are aware of the drastic consequences of anorexia nervosa and the impending health hazards which they are most likely to contract in near future.

**Purpose:** To find out frequency knowledge, attitude and practice (KAP) of AN among TG and to find out difference of mean age, weight, height, body mass index (BMI) and KAP among the two groups.

**Methods:** A comparative cross sectional study was conducted at a public higher secondary school of Rawalpindi from June 2013 till December 2013. 100 female students of the age group 13-19 years were inducted. Mixed pretested questionnaire was filled after informed verbal consent. TG were divided into two groups i.e. TG-AN and TG-Non AN. Data was entered and analysed using SPSS version 20.

**Results:** Forty two percent were categorized as TG-AN and 58% as TG-NAN. Sufficient knowledge, positive practice and positive attitude in TG were found to be 57%, 49% and 81% respectively. TG mean age, weight, height and BMI were found to be  $15.81 \pm 1.323$  years,  $50.34 + 10.445$  kg,  $160.14 + 7.846$  cm and  $19.675 + 4.1477$  kg/m<sup>2</sup> respectively. There was a statistically significant difference found in the mean heights while not in the mean age, weight or BMI of the two groups. Statistically no significant association was found between KAP and AN.

**Conclusions:** Anorexia nervosa is an emerging health concern in Pakistan. AN prevalent behaviour was observed in almost half of the teenage girls.

**Keywords:** Knowledge, Attitude, Practice, Anorexia Nervosa

## CORRELATION OF SELECTION SCORES WITH SUBSEQUENT PERFORMANCE IN ANAESTHESIOLOGY RESIDENTS AT A UNIVERSITY TEACHING HOSPITAL

Aliya Ahmed

Aga Khan University, Karachi

**Background:** The aim of specialty training programs is to select residents who perform well and develop into future experts. Selection criteria should thus be capable of predicting future performance. Several authors from North America have correlated selection criteria with performance getting varying results. Data from other parts of the world is scarce. The objective of this study was to determine the correlation of resident selection scores (RSS) with subsequent performance in anaesthesiology residents at a university hospital.

**Method:** Data were collected on 24 residents inducted between 2004 and 2007. RSS consisted of entrance test scores, medical school scores and interview scores. Assessment scores included written tests, viva voce and clinical assessment. Success in exit-level examination was also noted. Nonparametric spearman rank correlation coefficient was computed to assess the relationship between scores.

**Results:** No correlation was found between the overall RSS and assessment scores. Positive correlation was observed between cognitive component of selection score and cognitive assessment [ $p = 0.05$ ]. Positive correlation was also seen between interview scores and average clinical rotation scores ( $p = 0.037$ ). Success in exit level examination showed no correlation with RSS.

**Conclusions:** These results show that cognitive components of selection criteria predict performance in cognitive assessment but do not predict clinical performance while interview scores have a positive correlation with clinical performance. The authors recommend that anaesthesiology training programs should develop structured, objective tools to strengthen selection criteria. Future research should focus upon identifying traits that are most useful in predicting subsequent performance of anaesthesiology trainees.

**Keywords:** Resident Selection, Resident Performance, Anaesthesiology Residency Training

## A COMPARATIVE INVESTIGATION OF MALE AND FEMALE MEDICAL STUDENT'S MOTIVATION TOWARDS CAREER CHOICE

Hina Sattar, Lubna Meraj

Rawalpindi Medical College, Rawalpindi

**Background:** Studies from several parts of the world indicate that proportion of females seeking career in medicine is rising throughout the world. Till 1990 there was quota system for admissions in medical colleges of Pakistan when 80% seats were reserved for boys. Since the quota rule was lifted there has been a constant rise in number of female students in medical colleges of Pakistan especially in the province of Punjab and Sindh. Formal statistics are not available but it is reported that in these provinces females dominate and are about 70 to 80% of all medical students. Many of these female doctors don't practice medicine due to social pressure to get married, have children and raise them. Recently there was much debate in Pakistan when PMDC announced that it was implementing 50-50 quota for girls and boys in country's medical and dental colleges. No study has so far been done in the country to understand difference in motivation among both genders to pursue medical career. We are conducting this study to compare motivation to become a doctor in both genders.

**Methods:** This study will be conducted at Rawalpindi medical College. A questionnaire is developed for this study on the basis of previous surveys investigating the motivations of medical students towards career choice. Six dimensions are covered in the questionnaire including: status and security; the nature of the occupation; career opportunities; patient care and working with people; use of personal skills; and interest in science. The questionnaire will be distributed to 100 male and 100 female medical students chosen from a random selection of lecture slots. Age, gender and year of study will be recorded. Students will be asked to reply why they chose medical profession as agree or disagree against a list of 18 motivational factors.

**Results:** Results will be analyzed using SPSS v 19.

## STUDENTS' ACADEMIC MOTIVATIONAL LEVEL IN CLINICAL AND NON CLINICAL SETTING

Sana Khalid Mirza

Margalla Institute of Health Sciences, Rawalpindi

**Title:** There is an increasing focus in higher education on the role of learner characteristics and their influence on academic performance. Motivation is a factor essential for success. Educators are interested in how students engage with learning activities as they progress through the curriculum

**Background:** The purpose of this study is to determine differences in student motivational level in clinical and non clinical setting, the physical therapy program at different institutes of Rawalpindi and Islamabad.

**Methods:** A descriptive cross sectional survey will be conducted with purposive sampling and a sample of 400 students will be recruited. The study will be conducted in 10th January 2015 to 10th February 2015. A standardized academic motivation scale (AMS) will be circulated to students and demographic data will also be taken along with this scale.

**Results:** After the collection of data, results will be analyzed through different statistical test in SPSS20.

**Conclusions:** On the basis of finding a final conclusion will be drawn and few recommendations will be made on the basis of findings.

**Keywords:** Motivation, Physical Therapy, Clinical and Non Clinical Setting



## EFFECTIVE HEALTH SERVICE DELIVERY TO THE TARGET POPULATION

Almas Amin

Aga Khan University, Karachi

**Background:** The effective delivery of health care services is the prerequisite of the time. Intensifying provision to health is a significant approach to attain the Millennium Development Goals. We have emphasized the fact that for an efficient and successful dispensing of health care, there is a dire need to address inequities with a focus on provision of constant health education to physicians. The distinguished key factors of health include social, economic, demographic, and environmental variables, as well as individual characteristics and behavior has great influence on the delivery of health services. To promote an effective health care service one of the primary requirements is to educate health care providers. In a third world country like Pakistan, the health care workers are limited in access and knowledge about the basic, and practical information to deliver safe and effective care. There is lack of knowledge of the basics, of how to diagnose and manage common diseases associated with the provision of substandard care. Therefore, continual revisiting of the health information and advancement through CMEs keep the health professionals updated with the innovation in the field and provides confidence in decision-making. The multiple teaching strategies in delivering effective CME has shown improvement in physician practices and patient outcomes. The Aga Khan University is the only provider in the region for promoting cutting-edge continuing education as per international standards and the benchmarks. Our CMEs are planned taking into considerations the physicians need and keeping in focus the new progressions in the field of medicine. Though, continuing medical education activities doesn't produce immediate or direct results in delivering effective healthcare but has a long term impact in improving physician's behavior and health outcomes.

**Keywords:** Continuing Medical Education (CME), Health Inequity, Physician, Health Care

## MEDICAL STUDENTS' PERSPECTIVE ABOUT FACTORS MOTIVATING PARTICIPATION IN SMALL GROUP DISCUSSIONS

Aneeq Ullah Baig Mirza

Islamic International Medical College, Riphah International University, Rawalpindi

**Background:** What are the perspectives of undergraduate medical students about factors enhancing motivation to participate in small group discussions?

**Method:** MBBS students from first through fourth year were given a questionnaire. They were asked about the group characteristics, composition, expectations from the teachers, environment, additional tools and optimum time duration. The effects of granting extra marks for active participation, feedback and weightage of attendance in enhancing motivation in SGD were inquired. Finally continuation or abandonment of SGD was asked. After alignment of the data, the common perceptions were highlighted.

**Results:** A total of 290 students responded to the questionnaire. About the effective group size, 76.2% suggested 12 or less students. 52.75% opined that groups should be divided into subgroups according to the task. 51.03% were in favour of mixed gender composition of a group. A comfortable and air-conditioned environment was suggested as a motivating factor by 53.79% students. Use of models, laptops and internet during SGD was suggested by 33.44% students. Majority (80%) suggested an hour or less as sufficient time. Grant of extra marks (72.06%), feedback (75.86%) and weightage of attendance (66.55%) were all considered as positive motivating factors in making an SGD successful. A large majority (86.20%) were in favour of continuation of SGD as a learning tool.

**Conclusions:** A smaller group is more effective in SGD. A mixed gender composition and comfortable environment are strong motivating factors. One hour is sufficient time for effective SGD. Extra marks, feedback and credit of attendance are all positive motivating factors. SGD should continue as one of the learning modalities.

**Keywords:** Small Group Discussion, Student's Perspectives, Motivation.

## EDUCATIVE PSYCHOSOCIAL AND BEHAVIORAL MODEL FOR PRIMARY AND SECONDARY PREVENTION OF ISCHEMIC HEART DISEASE FOR PAKISTANI POPULATION

Rafia Rafique

Institute of Applied Psychology, University of the Punjab, Lahore

**Background:** Disease morbidity and mortality statistics reveal a massive decline in cardiovascular diseases and death rates in western countries. Coronary care has been enhanced in developed countries and risk factors identified by extensive research have been addressed through preventive strategies.

**Objectives:** The present study therefore aimed to propose a model for primary and secondary prevention of IHD by investigating psychological, social, behavioral and self-reported family history of IHD, disease history and anthropometric factors for the possible early onset of IHD in Pakistan.

**Methods:** The psychological factors explored were stressful life events, perceived stress, depression, anxiety, hostility, anger, locus of control and optimism; social factors included monthly family income, education, perceived social support and social dominance; behavioural factors were smoking, number of cigarettes smoked daily and ex-smoking status, alcohol intake, physical activity and dietary patterns; self-reported disease history, included family history of IHD, diabetes and hypertension; and anthropometric variables that included waist circumference, Body Mass Index (BMI) and Waist Hip Ratio (WHR).

Case-control research design was employed, with a purpose a sample of 190 cases and 380 age and gender matched community controls who ranged in age from 35 to 55 years were recruited from five hospitals that run a coronary care unit or equivalent cardiology ward. Standardized measures translated into Urdu language were used after determining their psychometric properties.

**Results:** Binary logistic regression analyses revealed that psychological factors like presence of two or more stressful life events and internal locus of control, family history of IHD, diabetes and BMI  $\geq 25$  kg/m<sup>2</sup> are directly associated with risk of IHD; and optimism, 12 to 14 years of education and useful level of 4 or more hours of physical activity per week are protective factors of IHD. In men presence of diabetes, two or more stressful life events, physical activity of less than 4 hours a day, being a smoker or an ex-smoker and smoking one pack or more cigarettes were associated with the risk of IHD. Optimism and external locus of control were significant protective factors of IHD for men. Trait of anger in women was found to be associated with risk of IHD. Social support played a protective role especially with regards to disease onset. Atherogenic diet rich in (egg, sweets, butter, red meat etc.) and low in (fruits and fish) were found to be significantly associated with risk of IHD

**Conclusions:** In the light of present findings a model for primary and secondary prevention of IHD is hereby proposed.

**Keywords:** Multivariate Odds Ratios, Primary prevention, Secondary prevention

## PREDICTIVE VALIDITY OF FAMILY MEDICINE RESIDENT'S PERFORMANCE AT INDUCTION WITH THEIR FUTURE PERFORMANCE DURING FINAL YEAR OF RESIDENCY

Samreen Kausar

Aga Khan University, Karachi

**Background:** Selection of candidates for enrolment into a residency program should be reliable, just, valid and fair. The Aga Khan University (AKU) Family Medicine residency is the first such program in Pakistan. Residents are selected annually based on an applied knowledge test, those shortlisted are called for a structured panel interview. Final selection is based on scoring of attributes of clinical expertise, professionalism and communication skills in addition to other criteria. To date there hasn't been a comparison of the resident's performance at the time of induction and in final year of residency. This paper aims to determine that whether induction scores of Family Medicine residents predict their future performance during residency.

**Methods:** A Psychometric study design with data of 30 residents who have graduated from the program from 2008-2014. The Independent and dependent variables were based on Knowledge, skills and attitude at the time of induction and the same during final year of residency. Data was compiled and entered in SPSS version 19. Pearson's correlation is used to find out the predictive validity of the induction independent variables with the outcome variables at 95% confidence level. The correlation co-efficient will be used to identify the strength of correlation. Linear regression analysis will be performed to estimate the predictive values of each item score of the induction criteria to the annual exam and in-training evaluation scores.

**Results:** We expect induction scores for each domain (knowledge, skills and attitude) to have moderate to high correlation with in-training assessment scores of the similar domain: and low predictive validity of induction scores with in-training scores assessing other (dissimilar) domains. Analysis is in process. Complete results will be available at the time of conference.

**Conclusions:** This study will inform whether induction scores of Family Medicine residents predict their future performance during residency.

**Keywords:** Family Medicine, Residency, Outcome Competencies

## COMPARATIVE STUDY OF FUNGAL AERO ALLERGENS IN MANSEHRA, KPK

Muhammad Farooq

Hazara University, Mansehra

**Title:** Comparative Study of Fungal Aero Allergens in Mansehra, KPK

**Background:** Air borne fungal spores are increasing in major cities of Pakistan and causing many allergies especially Respiratory disorders. The objective of this research was to isolate and compare fungal aero allergens from different areas of Mansehra.

**Method:** Gravitation plate method was used to trap air borne fungal species. Six localities were selected considering different aspects.

**Results:** A total of 12 fungal species were isolated from selected sites. *Alternaria alternata*, *Aspergillus flavus*, *Aspergillus Niger*, *Penicillium frequentans*, *Mucor hiemalis* and *Rhizopus oryzae* were dominant. A well-marked variation in composition of fungal spores was recorded. It has been observed that thickly populated areas showed more concentration of fungal spores. Most of the spores were trapped in July to September.

**Conclusions:** The presence of fungal allergens in the air of Mansehra could cause severe allergies in the local population so preventive measures should be taken.

**Keywords:** Fungi, Allergens, Spores, Allergy

## CURRENT LECTURING PRACTICES: ALARM BELLS RINGING

Aisha Ayyub

Yusra Medical and Dental College, Islamabad

**Background:** Ever since teaching had been started in the history of mankind didactic teaching remained the best known of all the means of knowledge deportation, until recently when its effectiveness has come under serious questioning. Studies have shown that merely covering the course content is of no value until the knowledge that is transferred is inculcated into practice. Taking this into consideration the objective of this study was to document the undergraduate student's perception regarding current lecturing practices.

**Method:** Data was collected from a representative group of undergraduate students of a public sector medical college. A structured questionnaire which was used to evaluate the students' perceptions regarding current lecturing practices consisted of 20 close-ended questions, which were subdivided into five categories, each category including four questions. These categories were general teaching practice (Q 1-4), teaching preparations of educationist (Q 5-8), content relevance with curriculum (Q 9-12), Interactive practices (Q 13-16) and Use of educational tools (Q 17-20). Statistical analysis was done through SPSS version 20.

**Results:** Out of 232 students 199 (85.8%) returned the questionnaire. Response of students to various questions were; learning objectives not defined clearly (97%), teachers don't give small tasks during the lectures (95%), didactic lectures as effective teaching tool (93%), teachers do not encourage active participation of students during lectures (91%), lectures are not in accordance with clinical practice (91%), teachers are not focused on subject (84%), students' starts talking when lose interest due to bored lectures (78.4%), feedback/ reflections are not asked at the end of lectures (89%).

**Conclusions:** Students perceived lecture as an important basic tool for acquiring knowledge and highlighted the lack of teacher-student interaction and poor presentation of course content as the main significant problems. Therefore it is recommended that Lectures to be delivered should be well prepared and interactive.

**Keywords:** Lectures, Professional Competence, Teaching

## COMPARING SIMULATION BASED TRAINING VERSUS TRADITIONAL BASED TRAINING OF CARDIAC AND PULMONARY AUSCULTATORY SKILLS IN CLINICAL SKILL LAB

Iqrah Iqbal

Ziauddin Medical College, Karachi

**Background:** Medical education all over the world is evolving at lightning speed and changes in the delivery of educational contents taking place on regular basis. Use of simulation and state of the art manikin and model in clinical skills lab is now a common practice. Simulation based learning not only gives better chance of practice, diagnosis but also enhanced patient care in a safe and artificial environment. It has been observed that physicians are experiencing lack of variety and number of patients in their clinical setting for training of medical students on auscultatory skills. Use of breath sound and heart sound simulator in clinical skills lab has enhanced teaching and learning skills among medical students.

**Purpose:** To determine the efficacy of auscultatory skills of cardiac and pulmonary sounds in 3rd year medical students of Ziauddin University who have been trained by traditional teaching as compared to those who are exposed to simulation based training

**Method:** Total number students in this study were 40 from 3rd year M.B.B.S program. These students were equally divided into two groups. Group A was exposed to traditional method of teaching where student were presented with patients with positive auscultation findings. Group B was taught auscultation skills with the help of simulator. After these training sessions each group were tested with the help of a questionnaire; this questionnaire consisted of identification questions as well as knowledge based open ended and closed ended questions. Data was collected using the SPSS version 20 and data analysis was done computing mean score, standard deviation and frequency table and graph.

**Results:** Diagnostic accuracy and correct identification of heart and breath sounds was better in a group which was taught through simulation based training. Mean score of assessment of knowledge about breath and heart sound was also significantly better in simulation group (mean=13.5 ± 1.73) as compared to traditional group (mean=6.9 ± 2.64). Test of significance with help of Paired t- test come out to be  $p < 0.001$ .

**Conclusions:** Students in simulation based training proved to be better in identification of breath and heart sound and also performed better in knowledge domain. While students in a traditional group performed poorly in their knowledge and skill domain.

**Keywords:** Simulation, auscultatory skills, breath sound, heart sound.

## COMPARISON OF TEACHING METHODOLOGY AND STRATEGIES OF TEACHER WITH PIONEER BATCH AND THE FOLLOWING BATCH AT GC UNIVERSITY, FAISALABAD

Rafia Imtiaz

Government College University Faisalabad

**Background:** At GC University Faisalabad, four new undergraduate programmes were started in 2012. The faculty was also young but quite intelligent and hard working. Most of them were going to have their first teaching experience. They worked hard with full enthusiasm and zeal on the 1st batch of Directorate of Medical Sciences. There were excellent outcomes, like better discipline and attitude of students along with wonderful grades. So a comparative study was made to evaluate the efforts of teacher teaching first time and the same teacher teaching second time with better experience and skills. Objective: Evaluation of non experienced teacher with his own experience Performance of pioneer batch and the following batch

**Methods:** College of Physical therapy, GC University Faisalabad Qualitative Comparative analysis 10 Questionnaire Results: About 85% teachers showed better results than the previous year. It was evaluated that an experienced teacher can teach better than a new one. The teaching methodology improves and skills are polished. About 85% of teachers showed improved results in their following class than the pioneer batch.

**Conclusions:** Students are more satisfied and the comparison of GPAs of the first and second batch declared that experience counts and leads to up gradation and refining of inter personal skills

**Keywords:** Teaching methodology GC University Faisalabad Experience