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## Peer Mentored Learning (PML): An Effective Tool to Enhance Learning among Undergraduate Medical Students

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**Background:** Peer Mentored Learning (PML) provides a good opportunity for senior medical students to shoulder responsibilities as a leader and offers an experience of managing a team of their peers and juniors. PML may offer better non-threatening learning environment to the students.

**Materials and Methods:** An interventional randomized study was conducted after approval from Institutional Ethics Committee with mentors from phase III part 1 and mentees from Phase II MBBS. The mentees were divided into Group I Faculty Mentored Learning and Group II Peer Mentored Learning. Formative assessment was conducted before and after the 4 weeks of mentorship. The predesigned validated questionnaire was used to assess the perception of mentors and mentees in PML group. Data was analyzed using paired, unpaired t test and Fisher exact test.

**Results:** The total response rate was 88.4% (84/95). The pretest score in FML group was  $15.93 \pm 4.07$  and in PML group was  $15.83 \pm 3.73$ . The post test scores in FML was  $16.21 \pm 4.93$  and PML was  $16.0 \pm 4.52$  which were higher compared to the pretest scores but not statistically significant. The mentors and mentees stated the positive outcomes and mutual benefits of the peer mentoring program. The mentees positive outcomes included academic support, guidance on structuring answers, time and stress management. The mentors positive outcomes included revision of topics, boosted confidence, ease of communication, better platform to interact with juniors and building healthy relationship. Mentors and mentees had no negative experience during mentorship.

**Conclusion:** Peer and faculty mentored learning had improved the student performance in formative assessment. Both mentors and mentees were satisfied with PML methodology and benefitted mutually in gaining academic and non academic support.

**Keywords:** Peer mentor, Faculty mentor, Formative assessment, Perception.



## Gender-Inclusive Curriculum for Health Professionals- An Evidence-Based Approach

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**Background:** Healthcare professionals are often at the forefront of providing care to diverse populations, including gender and sexual minorities, necessitating a comprehensive understanding of gender identity, expression and related health disparities (SDG 3). However, traditional nursing curriculum often lack adequate representation of LGBTQIA+ health issues. Objective of the study is to develop a gender-inclusive curriculum for health professionals.

**Materials and Methods:** This study, part of an ICMR-funded project followed Kern's six-step approach to curriculum development which is prepared by interprofessional team members. Ethical approval was obtained from the Institutional Ethical Committee. Step 1 assessed the health needs of LGBTQIA+ individuals through focus group discussions (FGD) with 11 participants. Thematic analysis using Open Code software identified key issues. Step 2 included an extensive literature review on LGBTQIA+ health needs. Steps 3 the curriculum was developed based on FGD findings and literature, covering six chapters: Introduction to LGBTQIA+, Inclusive Communication, Transgender Healthcare and Treatment Management, Mental Healthcare for LGBTQIA+ Individuals, Ethical and Legal Issues, Research and Evidence-Based Practice. The curriculum was validated and piloted and revised through expert review.

**Results:** The main themes emerged from the FGD were, experience of stigma while approaching health care, not getting attention, discrimination, inability of the health care providers understanding about them, their needs and the need for educating health care providers(step 1). In step 2, extensive literature search was carried out that literature reported stigma, discrimination, lack of knowledge among the health care providers. The results of FGD and the literature helped in preparing the curriculum. In step 3, the curriculum on inclusive health care was prepared with six chapters. The curriculum was validated by experts and the revised. This curriculum is applicable to all the health care professionals to enhance student's cultural competence, foster empathy, and improve patient outcomes in gender-diverse communities. The study focused on implementing and evaluating the curriculum through pilot testing among nursing students, assessing its impact on cultural competence, and knowledge enhancement (step 5 and 6).

**Conclusion:** The study provides a roadmap for creating more inclusive education for the health professionals, with the potential to impact broader healthcare practices and policies.

**Key words:** LGBTQIA+, gender inclusive curriculum, inequality (SDG 10), health (SDG 3), health professionals, FGD, qualitative research.



### Effectiveness of Incorporating ‘Animated Drawings in Power-point Presentations’ for Teaching Neuroanatomy to 1<sup>st</sup> MBBS Students

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**Background:** Using traditional PowerPoint (tPPT) as a teaching tool for neuroanatomy sections can limit interactive engagement and the depth of spatial understanding needed for complex anatomical structures. Utilizing ‘animated drawings’ in PPT (aPPT) can enhance the effectiveness of teaching complex Neuroanatomical sections. Thus, we compared the effectiveness of both methods in improving the drawing skills of Neuroanatomy sections. Objectives of the study is, to compare the effectiveness of using “Animated drawings in PowerPoint” versus Traditional PowerPoint teaching methods in improving the drawing skills of Neuroanatomy sections among 1<sup>st</sup> year MBBS students and to evaluate the perceptions and attitudes of students towards using the “Animated drawings in PowerPoint” as a learning aid for drawing neuroanatomy sections.

**Materials and Method:** Interventional study was conducted with Institutional Ethical Clearance and informed consent. Two sections of neuroanatomy, namely the Transverse Section of Pons at the Lower level and the Upper level, were taught to 90 first phase MBBS students (convenient sampling) using tPPT & aPPT methods. A diagram test (5 marks) was conducted and assessed using rubrics for both sections taught by the two techniques to evaluate their short-term (immediately) and long-term recall (after 4 weeks) of the skills learnt. The test scores were compared using the Wilcoxon signed rank test. Students' perceptions regarding aPPT method were gathered using a peer-validated questionnaire through google forms.

**Results:** The section taught with aPPT showed significantly high immediate short-term ( $p=0.002$ ) and long-term recall scores ( $p=0.018$ ). 98% (86) of the students expressed that the approach was useful in understanding & drawing the neuroanatomy sections and has good overall satisfaction & effectiveness.

**Conclusions:** The study results validate the effectiveness of using “Animated drawings in PowerPoint”, which not only enhanced knowledge acquisition but also received high appreciation from students, indicating its potential as a valuable teaching tool.



### Knowledge, Attitude and Practice Towards Medical Research Among Interns and Post Graduate Students of a Government Medical College: A Cross-Sectional Study

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**Background:** Biomedical research is essential for the betterment of patient health outcome. The medical students who are future doctors should be aware of research methods as they have to practice evidence-based medicine in patient care. Objective of the study is to assess Knowledge, Attitude and Practice towards medical research among Interns and Post graduate students of a Government Medical College.

**Materials and methods:** A Cross-sectional study was conducted from July to September 2024 among Post graduate and interns of Government medical college, Gadag. All postgraduates and interns who gave voluntary consent were surveyed online using self-designed, pretested, semi-structured questionnaire which included – 16 questions on knowledge, 12 on attitude and 6 on practice towards medical research was done after taking ethical approval from institution. Less than 50% correct answers were considered as having Poor knowledge score and rest of them as Good knowledge score. Assessment of attitudes was done by using 5-point Likert scale.

**Results:** Out of total 244 students, 173 responded to the study (87 interns, 86 PGs) and 99 were males. 41% students had good knowledge and 57.8% felt medical research should be made compulsory in medical curriculum and separate time should be allotted. Only 38.2% have done research work and all were postgraduates. Most, 70.1% perceived that research increases burden on already overworked interns and PG's. Statistically significant association was found between good knowledge and involvement in research.

**Conclusion:** There is inadequate knowledge and attitudes towards health research among students in our study. Interns did not involve in medical research. Although post graduates received training workshop on research but implementation was inadequate. Both interns and PGs should be trained and motivated to do research as part of their curriculum with adequate time duration to better impart the necessary research skills finally improving patient health outcome.

**Keywords:** Knowledge, Attitude, Practice, Medical research, Postgraduate students, Interns.



## Enhancing Teaching, Learning, and Assessment: A Narrative Review of Interactive E-Tools

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**Background:** Interactive e-tools have revolutionized the landscape of teaching, learning, and assessment in health professional education. With the rapid adoption of digital technologies, understanding the efficacy, challenges, and best practices associated with these tools is essential for optimizing their integration into educational settings. This study aimed to comprehensively review the role of interactive e-tools in enhancing teaching, learning, and assessment across various educational disciplines, with a specific focus on their application in health professional education.

**Materials and Methods:** This review included 16 English-language articles published between 2010 and 2024. The articles were identified from databases such as PubMed, Scopus, and Google Scholar. The authors, SG and NK, independently screened the articles, reviewed their content, and synthesized narrative themes. Studies included randomized controlled trials (5), observational studies (3), Narrative reviews (5) and cross-sectional study (3). The findings were categorized into four themes: teaching, learning, assessment, and challenges.

**Results:** The review highlighted that interactive e-tools improved student engagement, critical thinking, and knowledge retention. Virtual simulations, augmented reality, and gamified platforms were reported in 15 studies, with an average 25% increase in learner performance compared to traditional methods. In assessment, tools such as online quizzes, e-portfolios, and AI-based evaluations enhanced accountability and feedback, with 10 studies showing a 30% improvement in efficiency. Challenges were quantified as follows: technological literacy gaps (30% of studies), inadequate infrastructure (25%), and user resistance (20%). Learning enhancement was evidenced by mastery of skills (up to 90%) in multimodal approaches and a significant reduction in cognitive load in collaborative learning setups.

**Conclusion:** Interactive e-tools effectively address the evolving needs of education by enhancing teaching, learning, and assessment. This review provides quantified evidence of their benefits and emphasizes the importance of strategic implementation. Overcoming barriers such as accessibility and training will be crucial to realizing their full potential in health professional education.

**Keywords:** Interactive e-tools, Teaching and learning, Assessment, Educational technology, Health professional education.



### **Aligning United Nations Sustainable Development Goals with Health Professions Education: A Practical Checklist for Curriculum Revamp**

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**Background:** The 17 United Nations Sustainable Development Goals (SDGs) envisioned in 2015 aim to address global challenges like poverty, inequality and climate change, all of which are closely linked to health. The most related SDGs however are Good Health and Well-Being (3), Quality Education (4), Zero Hunger (2), Gender Equality (5) and Clean Water and Sanitation (6). Integrating these SDGs into health professions education (HPE) is crucial for empowering the clinical workforce to work towards these global goals by 2030.

**Methods:** Thorough brainstorming of the UN sustainable development goals, targets and indicators was done by the author to identify possible roles of healthcare professionals' contribution. Relevant targets were identified and mapped to the existing MBBS curriculum as a basis for formulating a checklist highlighting the role of educators. A structured, actionable checklist was then created to guide the incorporation of these global goals into medical education which can be replicated to allied health courses as well for quick curricular revamp.

**Results:** Out of the 169 targets contained in the 17 SDGs, 73 were found likely to be influenced by the healthcare professionals directly or indirectly. Incorporation of these points in the checklist defines the particular role of HPE in training the future professionals for contribution towards the global goals. Interdisciplinary and trans-national collaboration is the key to sustainable solutions, with a focus on global health leadership. Health equity, cultural competency alongwith policy education should be prioritized to prepare students for addressing the underprivileged population and health reforms and advocate for SDG-related goals.

**Conclusion:** The checklist integrates UNSDGs to healthcare education, aligning and equipping healthcare training for ensuring sustainability.



## Exploring the Use of Social Media for Education Among Audiology and Speech-Language Pathology Students in India

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**Background:** Social media (SM) platforms offer dynamic, learner-driven, collaborative, and engaging features that enhance interactivity in e-learning. Despite their potential benefits, limited research exists on the adoption and perspectives of SM use among students of audiology and speech-language pathology. This study investigates the utilization of SM by these students and their perspectives on its role in education.

**Materials and Method:** A questionnaire was designed and validated through the Delphi method with input from three health profession education experts. Hosted on Google Forms, the questionnaire was shared via WhatsApp groups, Facebook, and Instagram. The first page of the form included an information sheet and consent form, with access granted only after participants consented to the study. The participants were students enrolled in bachelors, masters, and doctoral programs in audiology and speech-language pathology across India.

**Results:** A total of 194 responses were collected, comprising 143 bachelors, 49 masters, and 2 doctoral students. The most recognized platforms were Instagram (95.4%), WhatsApp (94.3%), and YouTube (92.8%). Among respondents, 94.3% reported using SM for educational purposes, with 75% dedicating less than two hours daily to learning. Key learning areas included disorders (77.8%) and case studies/communicative technologies (49%). Preferred content formats were video-based (e.g., lectures and tutorials, 90.7%) and text-based (e.g., articles, 76.3%), while podcasts (15.5%) were less favoured. Notable challenges included distractions from non-educational content and concerns about the accuracy of information.

**Conclusion:** The study highlights the widespread use of SM for educational purposes among audiology and speech-language pathology students, with Instagram, WhatsApp, and YouTube being the most popular platforms. SM facilitates access to diverse educational resources and collaborative learning opportunities. However, challenges such as distractions and content reliability highlights the importance of proper guidance and curated resources to optimize its educational value.

**Key words:** Social media, Education, Audiology, Speech Language Pathology



## Development & Validation of Entrustable Professional Activities for Pathology Postgraduate Trainees

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**Background:** The concept of Entrustable Professional Activities was introduced in 2005. They are unit of professional practice that can be fully entrusted to the trainee as soon as he/she demonstrates necessary competence to execute the activity unsupervised. Enables a shift of focus from individual competencies to the work that must be done. Help to operationalize competencies Provides a road map for training in the clinical workplace. There is no uniform set of EPAs available for the training of the postgraduates in the speciality of Pathology. Objectives of the study is to develop a set of Entrustable Professional Activities [EPAs] for Pathology postgraduate trainees in alignment with the programme outcomes, competencies given by the National Medical Commission and to validate the shortlisted Entrustable Professional Activities [EPAs] by using the EQual Rubric

**Materials and Methods:** A core EPA team was formed with 3 senior Professors and 3 Associate professors. They were sensitized on the concept of EPAs and a set of 100 Entrustable Professional Activities [EPAs] in alignment with the programme outcomes laid down by the National Medical Commission was prepared. The list was circulated to the expert panel members of another 20 Professors The experts were asked to grade the EPAs on a scale of 0–4 based on how important they consider that activity for a resident to be able to perform during the training The cumulative score of each activity divided by the number of respondents to arrive at the mean score. The activities with mean score of 3 or more qualified was shortlisted as consensus EPAs. The total time line for this process was six months.

**Results:** From the initial list of 100 EPAs only **35 EPAs** were shortlisted as **Mandatory** (4). Another list of **25 EPAs** were shortlisted as **Very important** (3). Validation of these 35 EPAs were done using the EQual rubric with 14 items. Each item was rated against a Likert Scale of 1 to 5 EQual Rubric validates EPAs under three constructs Task Validation, Outcome Validation and Framing Validation. 10 EPAs were selected 3 each from Histopathology and Clinical Pathology and 2 each from Cytopathology and Others. This was done by consensus among the teaching faculty in the department and is been implemented since 4 months.



### **A Pilot study on Awareness and Knowledge of Attention Deficit Hyperactivity disorder among Technology students in Chittoor**

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**Background:** Attention deficit Hyperactivity Disorder (ADHD) is a neurodevelopmental disorder characterized by symptoms of inattention, hyperactivity and impulsivity. It is one of the most common childhood disorders and can persist into adulthood. It affects approximately 8-10% of children worldwide. ADHD is associated with various complications and comorbidities, therefore early diagnosis and treatment are vital.

**Materials and Methods:** For this study, the convenience sample of 50 First year male and female technology students who were willing to participate were surveyed. The sample completed previously validated self-administered questionnaires. The survey was conducted via Google form. Distributed statistics and Microsoft excel were used to calculate the results.

**Results:** Thirteen students (26%) scored >6 points, indicating a potential awareness and understanding of ADHD. Among these 13 students, 6 were female (46%) and 7 were male (54%). A significant knowledge gap was observed, as 16 students (32%) were unaware of the abbreviation "ADHD". The mean score of 6.5 suggests that, on average, respondents had a moderate level of ADHD awareness and knowledge. The result suggests that Technology students have a moderate level of ADHD awareness and knowledge, which is significantly higher than the hypothetical population mean.

**Conclusion:** Only One –fourth of the participated students had appropriate awareness on ADHD. The study highlights the need for education on awareness of ADHD. Further research with larger population on ADHD awareness and education is warranted.

**Key words:** Attention Deficit Hyperactivity Disorder (ADHD), Technology students, pilot study



### Integration of Social Media in Teaching Practices: Insights from Audiology and Speech-Language Pathology Faculty in India

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**Background:** This study explores the integration of social media (SM) in teaching practices among Audiology and Speech-Language Pathology (ASLP) faculty through a questionnaire-based approach. It examines faculty perceptions, usage patterns, and the impact of social media on education. The findings aim to enhance innovative teaching strategies and promote digital literacy in ASLP education.

**Materials and Methods:** A questionnaire was developed and validated using the Delphi method with guidance from three health profession education experts. It was hosted on Google Forms and disseminated through WhatsApp groups, Facebook, and Instagram. The form's first page included an information sheet and consent form, granting access only upon participants' consent. There were 22 questions in the format of multiple choices, Yes/No and rating scales. Faculty members teaching bachelors and masters programs in audiology and speech-language pathology at various institutes across India participated in the study.

**Results:** A total of 54 responses were collected across the various parts of the country. Out of them, 22.2% of them did not use SM for teaching and 77.8% were using SM to teach the students. Majority of the faculty (88.4%) believe that Youtube and Whatsapp are highly effective platforms for teaching the students. 92.4% believe that SM is highly effective in student engagement and professional development. 73.4% of them reported that they share educational articles and research papers, Video lectures and tutorials to students through SM. Notable challenges reported by the faculty included difficulty in finding credible sources, privacy and data security concerns, balancing time between social media and traditional teaching methods, Technical issues.

**Conclusion:** This study highlights the growing role of social media in teaching practices among ASLP faculty in India, with majority of the participants using platforms like YouTube and WhatsApp for educational purposes. While most faculty view social media as effective for student engagement and professional development, challenges such as credibility, privacy, and time management persist.

**Key words:** Social media, Education, Audiology, Speech Language Pathology



## Students' Reflection on Usefulness of Attitude, Ethics and Communication (AETCOM) Module 1.3 of Physiology Undergraduate Curriculum

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**Background:** The Attitude, Ethics and Communication (AETCOM) module was introduced in the Competency Based Medical Education (CBME) curriculum in the year 2019 to impart soft skills for personal and professional development of medical students. Among this, Module 1.3 deals with the “Doctor-Patient relationship” which forms an integral part of clinical practice. This study was conducted to record reflections of first year MBBS students regarding usefulness of AETCOM module 1.3.

**Materials and Methods:** Mixed method explorative study done in Dept. of Physiology, Tripura Medical College & Dr. BRAM Teaching Hospital. Universal Sampling method was used. Study included students of first professional MBBS. A Feedback questionnaire of 8 questions (viz. real life situation, helped learning better, relevance, easy learning, can improve participation, helps gain competencies, enjoyable, preference for more AETCOM), was distributed and filled by students at the end of AETCOM module 1.3 session. Responses were graded on five point Likert scale as 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree and 5=Strongly Agree. Mean attitude score was generated separately for each student. Result was expressed in terms of frequency, percentage, mean and S.D.

**Results:** As Maximum point of Likert scale allotted to each question was 5 (Strongly Agree), so overall Attitude score of 8 questions is  $5 \times 8 = 40$ . Out of 40, we found 71% students had attitude score  $> 35$  while 29% student had score  $\leq 35$ . Mean attitude score of students to every questions ranged between 4.4 to 5. 64.1% students strongly agreed regarding benefits of AETCOM module 1.3, 33.5% agreed while 2.2% students each showed neutral opinion and disagreement respectively.

**Conclusion:** 95% Students agreed that the AETCOM module helped them learning better. Thus, we concluded teaching and learning of AETCOM module 1.3 can be an effective way for students to develop communication skills, doctor-patient relationships and to understand the professional qualities and roles of a physician.

**Keywords:** Medical Education, AETCOM module, Doctor-Patient Relationship, Medical Students



## Enhancing Medical Education in Diet and Nutrition: Implementing Practical Demonstration Techniques for Medical Students

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**Background:** This study explored the effectiveness of incorporating practical techniques in diet and nutrition classes for medical students, with the goal of enhancing understanding of application of dietetics principles in practical settings.

**Materials and Methods:** A database (PubMed, ERIC, Google Scholar) search, on use of practical demonstration techniques in medical nutrition education was conducted, to synthesize studies, reviews, and expert opinions. During a subsequent single-group observational study, thirty medical students enrolled in a diet and nutrition course of the third MBBS Community Medicine posting participated in practical demonstration sessions, including food preparation observation, meal planning, and interpreting nutritional information. Knowledge and skills were assessed using pre- and post-course surveys and practical assessments. Thematic analysis was used to analyse qualitative feedback from students regarding their engagement, confidence, and ability to apply nutrition knowledge in clinical scenarios.

**Results:** The results showed significant improvements in students' knowledge of topics like "Basic Human Nutrition" and the "Role of Diet in Chronic Diseases," as well as their perceptions of nutrition's importance in holistic patient care. Confidence in discussing nutrition, recommending dietary changes, and integrating it into clinical plans also increased notably. Performance assessments highlighted strong student competencies, with 60-67% achieving excellence in "screening tools" and "empathetic communication". Practical demonstrations were particularly effective in culturally sensitive meal planning and identifying nutritional diseases. However, justification of diet plans with references was identified as a relative weakness, with only 30% rated "excellent" and 10% requiring improvement.

**Conclusion:** Practical demonstration techniques equip medical students to integrate nutrition into patient care. This approach supports the growing demand for experiential learning in medical curricula and ensures future healthcare providers are prepared to address the increasing importance of nutrition in disease prevention and management. Further research is needed to assess long-term outcomes, including changes in clinical practice and comparisons with traditional lecture-based teaching methods.

**Key words:** Nutrition, Education, Medical Students, Disease, Prevention, Management, practical, demonstration



## The Influence of Competency-Based Teaching Module on Learning Domains of Undergraduates Physiotherapy Students

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**Background:** Traditional education in fields like physiotherapy typically offers a structured and predictable learning environment where time-based models and interaction with subject experts are emphasized. Competency-Based Teaching offers a more flexibility, skill-focused approach ensuring learners acquire theoretical knowledge and develop the practical skills and competencies required for effective real-world practice. The objective of the study is to examine the effect of the Competency-Based Teaching module on the learning domains of undergraduate physiotherapy students.

**Materials and Methods:** A total of 30 participants were assigned into two groups: Competency Based Teaching Group A (n=15) and Traditional Teaching Group B (n=15). Pre assessment (theory) was carried out using Multiple Choice Questions (MCQ). All the participants underwent 30 hours of training. Post assessment was carried out using MCQ and Objective Structured Practical Examination (OSPE) for both the groups.

**Results:** The mean score and standard deviation for pre-test- MCQ, post-test-MCQ and post-test OSPE assessment scores of Group A was  $14.46 \pm 5.02$ ;  $32.40 \pm 3.54$  and,  $19.26 \pm 0.79$  and of group B was  $16.96 \pm 4.51$ ;  $23.69 \pm 5.85$ ;  $14.46 \pm 1.5$  respectively. There was a statistical significance in post MCQ and post OSPE performance scores of Group A than Group B with post MCQ: t value = -4.835, p value= 0.000 and post OSPE: t value = -4.039, p value= 0.000 respectively.

**Conclusion:** The study demonstrated that Competency-Based Teaching led to significant improvements in the cognitive and psychomotor skills of physiotherapy students compared to traditional methods, indicating the effectiveness of Competency-Based Teaching in fostering better learning outcomes and scope in the field of physiotherapy.

**Keywords:** Competency Based Education; Clinical Skills; Academic Training; Physiotherapy Specialty; Undergraduate.



### The Role of Project-Based Learning in Enhancing Academic Performance and Competency; its Association in Communication, Creativity, and Collaboration Among First-Year MBBS Students

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**Background:** Project-Based Learning (PrBL) is an innovative educational approach that emphasizes collaborative learning, critical thinking, and problem-solving. By engaging in group projects, students not only deepen their understanding of complex concepts but also develop essential skills like communication, creativity, collaboration, and leadership. Unlike traditional methods, PrBL allows students to explore real-world problems, fostering deeper engagement and intrinsic motivation. This study aims to evaluate the effectiveness of PrBL in improving academic performance in conceptual topics among first-year MBBS students, and to examine the relationship between PrBL and the development of essential skills such as communication, collaboration, creativity, leadership, and presentation. Objectives of the study is to Evaluate the Effectiveness of PrBL in students' performance in Conceptual topics with Competency based Questions and to Investigate the relationship between academic achievement and the acquisition of communication, collaboration, creativity, leadership, and presentation skills within a PrBL context.

**Materials and Methods:** The research was conducted on 150 first-year MBBS students enrolled in the academic year 2023-24, who were divided into 21 groups. The Department of Anatomy introduced PrBL for selected conceptual topics essential for clinical skills competency. A quasi-experimental design was used, with pre- and post-test assessments, alongside rubric-based evaluations of student projects. Multiple linear regression analysis was employed to examine the relationships between academic performance and skill development as indicated by rubric scores.

**Results:** The results from paired sample t-tests showed a statistically significant improvement in academic performance from pre-test (mean: 44.58) to post-test (mean: 51.41) scores. Furthermore, the multiple regression analysis indicated that collaboration, creativity, leadership, communication, and presentation skills were significantly correlated with improved academic outcomes, with an R-squared value of 97.9%. The study highlights that PrBL not only enhances conceptual learning but also facilitates the development of essential interpersonal and cognitive skills necessary for future medical practice.

**Conclusion:** These findings suggest that incorporating PrBL in medical education can foster deeper learning, improve academic outcomes, and promote the holistic development of future healthcare professionals.



## Group Dynamics and Team Building: The Teaching-Learning Process in Medical Education

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**Background:** Gatherings of learners always produce dynamics that are distinct from those of our regular dyadic interactions. Our impressions of other people's likeability and our understanding of the group's objective are influenced by the environment that each individual in the group produces. \

**Methods:** A mixed method was used for conducting this study, involved a 45-minute team-building session for incoming second-year medical students. The session included an introduction to small group learning, breakout sessions, and a storming stage. The first session focused on forming group goals, setting rules, and role-playing conflict scenarios. The facilitators encouraged participation and continued discussion. After the session, students completed a survey and self-evaluation. After two months of weekly group work, they completed self-evaluation and peer-evaluation. The study emphasized the importance of ongoing communication and collaboration in team-building activities.

**Results:** A team-building session was conducted among 150 students, with 120 completing a survey after the session. The survey received positive responses from 97% of students, focusing on group communication, collaboration, and expectations. Feedback on the storming stage included perception of personal and group capacity for working through conflict. Self-evaluation and peer-evaluation were required at the mid-point of the semester after two months of small group work.

**Conclusion:** The small group team-building session is a valuable tool for medical educators to guide students through group work without significant schedule time. It helps students transition from conflict to performing stages, enhancing learning goals. Despite limitations like not considering norming and performing questions, it remains an adaptable option for medical educators.

**Key words:** Medical education, Group dynamics, Team building, Facilitators, Learners.



## Objective Structured Practical Examination (OSPE): An Effective Tool for Formative Assessment

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**Background:** The Objective Structured Practical Examination (OSPE) is a useful alternative to traditional evaluation methods in medical colleges, but its use is limited due to resource requirements. This study aims to improve understanding.

**Methods:** A total of 130 second-year professional MBBS students were included in the study. The skills of the medical students were assessed on the basis of their performance. Four stations were formed, of which two were procedure stations and other response stations. Students were evaluated using the OSPE model. OSPE additionally broke down to see the lacuna in any progression or any inquiry with respect to students. Traditional techniques and procedural and response stations in OSPE were investigated to learn the knowledge, skill, and competency of students in this subject. Student's opinion about the new method was collected through a questionnaire and analyzed.

**Results:** A total of 130 students from MBBS' second professional year were included in the study. Of which, 91.54% of students felt that they were given adequate time at each station adequate, 71.54% responded that they were prior sensitized about OSPE, 93.08% responded that the exam was not stressful, 94.62% said that the OSPE was very much organized, applicable, and uniform, 80.77% said that the exam covers the appropriate knowledge than the traditional examination, and 76.15% opined that such type of exams should be included in the future as a method of formative assessment in practical examination.

**Conclusion:** The study demonstrates that OSPE overcomes subjectivity in conventional methods, identifying students' skill gaps and recommending teachers for increased concentration. It emphasizes the implementation of OSPE for formative assessment in undergraduate medical education.

**Key words:** Formative assessment, Medical students, Educators.



## Student Perception on Project Based Learning

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**Background:** Project based learning is a new addition in medical education curriculum which involves new strategies of learning in the field which focuses on learning by doing. PBL methodology focuses on teachers being the facilitators and the students as learners. It makes the learning more interactive developing knowledge, skills and attitude in students.

PBL enables students to develop better understanding of the topic through self-directed learning strategies and intensive peer to peer interaction. PBL improves the retention of a given subject by bridging the theoretical knowledge to real life scenarios. PBL focuses on knowledge through exploration.

PBL in medical curriculum improves teamwork, social behavior, coordination and collaboration in groups. At the same time, it helps develop personal qualities and skills like self-confidence, decision making abilities, scientific thinking, creativity, problem solving with interpersonal life skills. Objective of the study is to know the perceptions of students on PBL.

**Materials and Methodology:** Qualitative and quantitative research: Quantitatively focusing on Structured questionnaires with Likert-scale and thematic analysis of feedback forms. Qualitatively by focus group discussions with feedbacks and questions to study the attitude and knowledge of PBL. The study population are 150 medical students who were a part of PBL during academic year 2023-2024 as MBBS Phase 1 students.

**Results:** Analysis of the surveys data presented the fact that majority of students agreed that PBL helped them in gaining knowledge and retaining them and at same time explore creative ways of studying subjects and developing skills.



## Influence of Learning Styles on Burnout Levels

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**Background:** Burnout is prevalent in medical students due to the paramount syllabus and restricted period. It has three components: Emotional Exhaustion, Depersonalization, and Lack of personal achievement. Learning styles or preferences are how an individual processes new information efficiently. The Types of Learning Styles include Visual, Auditory, Kinesthetic and Read/ Write. This study aims at identifying the relationship between various learning styles and burnout levels. Although research into study-related burnout has been undertaken, the relationship between study-related burnout and students' learning processes has not yet been studied. Thus, it is important to examine how different students with different learning profiles experience study-related burnout to understand the connection better and support students in their study at university.

**Methods:** This study aims to investigate the relationship between burnout and various learning styles in medical students, addressing two key research questions: how different learning styles influence burnout levels and whether alignment to preferred learning styles correlates with burnout. Utilizing a mixed-method approach that combines qualitative, exploratory, and correlational elements, the study will involve a convenience sample of 150 Phase-II MBBS students aged 18–25. Data will be collected using the VARK questionnaire to categorize students into Visual, Auditory, Kinesthetic, or Read/Write learners and the Maslach Burnout Inventory–Student Survey to assess burnout levels. Fisher's Exact Test will be employed for data analysis to explore these relationships.

**Results:** The cynicism component of burnout was found to be statistically significant across unimodal learners. No statistically significant relation between unimodal, bimodal, multimodal learner and components and burnout.

**Conclusion:**

Interventions to reduce cynicism should be devised. Better equipped students with knowledge about learning styles & burnout.



### Achieving the Outcome of Interprofessional Experiential Learning among Undergraduate Students through Portfolio- A Quasi-Experimental Study

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**Background:** Interprofessional Education (IPE) involves collaborative learning among two or more healthcare professionals to improve teamwork, communication, role clarity, ethics, and patient-centred care. This study assessed IPE outcomes using a portfolio-based assessment tool (PAT) through a behaviourist approach. The objectives of the study are to Assess knowledge about, readiness for IPE and evaluate interprofessional learning activities using a portfolio.

**Materials and Methodology:** A quasi-experimental study was conducted from January to December 2024 with 93 second-year MBBS and 38 second-year BSc paramedical students. Eight experts assessed the PAT content validity, which achieved a content validity index of 0.91. In phase one, readiness and knowledge were evaluated using the Readiness for Interprofessional Learning Scale (RIPLS) and a validated multiple-choice pre- and post-test questionnaire. In phase two, experiential learning (EL) activities—case-based discussions, problem-based learning, and simulations—were integrated into clinical postings. EL activities documented in the PAT were assessed on cohesiveness, concept understanding, and presentation skills using a 3-point rating scale.

**Results:** The study included 81 girls and 49 boys aged 18–21. Readiness scores were high (mean  $\pm$  SD: 73.44  $\pm$  9.14). Significant knowledge improvement was observed from pre-test (mean rank 106.80) to post-test (149.37,  $p \leq 0.000$ ). Portfolio scores met expectations (mean  $\pm$  SD: 2.19  $\pm$  0.48). No significant differences in learning outcomes were found between MBBS and BSc students ( $p \leq 0.280$ ).

**Conclusion:** IPE fosters collaborative skills essential for patient safety and integrates well into health curricula. Experiential learning activities in real-world settings, evaluated through a validated portfolio, enhance interprofessional competencies and readiness for collaborative practice.

**Key words:** Interprofessional Education, Experiential Learning, Portfolio, Readiness score.



### Evaluation of The Role of Peer Assisted Learning as Adjuvant to The Traditional Lecture Based Teaching Learning Method in Competency Based Medical Education

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**Background:** In traditional lecture-based teaching, it is challenging to oversee individual student needs. Competency based medical education encourages the Indian medical graduate in critical thinking, reasoning and knowledge acquisition by discussions, training and mentoring. In peer assisted learning (PAL), students from similar social groupings may mentor, teach and learn from each other.

**Materials and Methods:** Study was carried out in Phase I MBBS students in Department of Biochemistry. Institutional Ethics Committee approval was obtained and written informed consent was taken from the students. One hour traditional classroom lecture was conducted, followed by a two hour PAL session on a different day, with topic being informed in advance. Upon explaining purpose of the study in a priming session, students preferred selecting their study partner. PAL session had a pre-test and post-test comprising of 10 multiple choice questions with 10 marks each. Four PAL sessions were conducted at a frequency of once a week. All students present actively participated in PAL. Statistical analysis: Two tailed paired t-test to analyze difference between pre and post-test scores

**Results:** Number of students in the four PAL sessions were 139, 151, 130 and 156. Mean post test scores in PAL session were higher compared to pre test scores ( $7.64 \pm 1.81$ ;  $7.96 \pm 1.51$ ;  $7.5 \pm 1.76$ ;  $7.64 \pm 1.77$  vs  $4.85 \pm 1.77$ ;  $5.27 \pm 1.76$ ;  $6.02 \pm 1.66$ ;  $3.76 \pm 1.70$ ;  $p < 0.001$ ). Students scoring more than five marks in post tests were higher compared to pre-tests (84.89%, 93.37%, 85.38%, 87.17% vs 35.25%, 41.72%, 66.15%, 16.66%). Students having post test scores less than five marks were 6.47%, 4.63%, 4.61%, 3.84%.

**Conclusion:** An improvement in academic performance with PAL can be due to constructive academic interaction. It is proposed that same peer group provides a relaxed atmosphere where peers can interact effectively. To a major extent the gaps in curriculum delivery by traditional didactic lectures may be addressed by PAL.

**Key words:** Peer assisted learning, traditional lecture based teaching, pre test, post test



### Exploring Clinical Practice Experiences Among Nursing Interns: A Qualitative Study

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**Background:** Nursing students enter to the nursing profession with minimum knowledge on an occupation but during their four years of the program, they gain skills that change their lives. Hence the study was undertaken to know the lived-in experience on clinical practice among nursing interns.

**Objective:** To explore the lived experiences of nursing interns during clinical practice through the use of an open-ended questionnaire.

**Material and Methods:** This is a phenomenological study. Twelve nursing students studying in final year B.Sc(N) at Sri Devaraj Urs College of Nursing and undergoing internship clinical training from different wards of R.L.Jalappa hospital and research center were selected through purposive sampling technique. All participants were interviewed using open ended questionnaire through focus group discussion. The topics covered in questionnaire was student experience in clinical area, the best and worst things they were experienced, clinical training was considered has a boring or enjoyable one and is they have got sufficient exposure in clinical area during their training. All interviews were conducted in private, quite conference room to maintain privacy. The time taken was approximately 60 minutes to collect data and verbatim transcription.

**Results:** Study revealed that, all study's participants were females, aged between 21 to 22 years and 83.33% were posted in critical areas. From the study five themes were extracted and they were clinical trial, gratitude, care preference, confident and best and worst experiences.

**Conclusion:** The study concluded that, nursing students are facing lot of challenges during their clinical postings, hence there is a need for peer mentoring at the beginning of student's clinical exposure.



### Impact of Integrated Case-Based Learning on Anatomy Education: A Mixed-Methods Study Among First-Year Medical Students

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**Background:** Traditional anatomy education often struggles to demonstrate clinical relevance to first-year medical students. Case-based learning (CBL) integrated with traditional teaching methods shows promise in bridging this theory-practice gap, yet evidence of its effectiveness in the Indian medical education context remains limited. This study aims to evaluate the effectiveness of an integrated case-based learning approach in improving anatomy knowledge retention, clinical application skills, and student engagement among first-year medical students.

**Materials and Methods:** A mixed-methods study was conducted from July 2023 to December 2023 among 150 first-year MBBS students. Students were allocated using stratified random sampling based on entrance exam scores and gender. The intervention group (n=75) received case-based learning sessions integrated with conventional teaching (comprising didactic lectures, cadaveric dissection, and small group tutorials), while the control group (n=75) received conventional teaching only. Assessment methods included pre-post knowledge tests, objective structured practical examinations (OSPE), student feedback questionnaires, and focus group discussions.

**Results:** The intervention group demonstrated significantly higher scores in post-intervention knowledge tests (mean difference: +12.4%, 95% CI: 9.8-15.0,  $p < 0.001$ ) and OSPE (mean difference: +15.2%, 95% CI: 12.5-17.9,  $p < 0.001$ ) compared to the control group. Clinical application scores showed marked improvement (intervention: 78.5% vs control: 65.3%,  $p < 0.001$ ). Qualitative analysis revealed enhanced student engagement (thematic score: 4.2/5), better understanding of clinical correlations (4.5/5), and improved problem-solving skills (4.3/5). Student satisfaction surveys indicated strong preference for integrated CBL (85% positive responses). Faculty feedback highlighted improved classroom dynamics and student participation.

**Conclusion:** The integrated case-based learning approach significantly enhanced anatomy education outcomes, demonstrating improved knowledge retention, clinical application skills, and student engagement. This pedagogical model offers a practical framework for implementing clinically-oriented basic science education in medical curricula.

**Key words:** Case-Based Learning, Anatomy Education, Mixed-Methods Study, Medical Students, Clinical Application



### Is There an Association between Physical Exercise and Screen Time, Sleep, Anxiety Among Indian Health Care Students

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**Background:** Intrusion of internet in our life due to modern technology has made our life easy by many ways but its usage in unlimited and exhaustive manner like gaming, binge watching etc has resulted in many hazards effects. Even though, it's usage is an essential part of our life. It is found that there is association between the increased screen time and anxiety. So, it necessitates to find out whether there is any association between physical activity and sleep, screen time and anxiety. There no much information regarding it. Aim of the study is to find whether there is any association of physical exercise and increased screen time, sleep and anxiety. The objectives of the study are to assess the duration of screen time, examine the duration and type of physical exercise, and evaluate sleep and anxiety scores among participants.

**Materials and Methods** - A total of 400 students aged between 17 to 22 years who are students of health care studies were included in the study after taking ethical clearance . The study was a observational cross sectional study and information on sleep ,physical activity, anxiety and screen time was collected by a self-administered questionnaire using sleep score (Pittsburg's sleep score) anxiety score (Becker's anxiety score) and physical activity information like total physical activities, moderate to vigorous physical activity (MVPA),and outdoor physical activities.

**Result :** The data obtained will be tabulated and statistically treated



**Prevalence and Severity of Insomnia Among College Students: Insights from a Cross-Sectional Study**

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**Background:** Insomnia affects young adults, especially college students, due to high stress and lifestyle factors. This study assessed insomnia prevalence and severity in students aged 18-25.

**Materials and Methods:** A cross-sectional study of 1,025 students used the Insomnia Severity Index (ISI) and Pittsburgh Sleep Quality Index (PSQI) to evaluate sleep. Data on age and gender were also collected. Descriptive statistics analyzed insomnia and sleep disturbances.

**Results:** The mean PSQI score was 13.47, indicating poor sleep quality. The mean ISI score was 7.63, showing mild insomnia. Among the sample, 45.7% had some insomnia, with females at 57.3% and males at 42.7%. Females showed a higher prevalence of sleep disturbances, indicating a significant insomnia burden.

**Conclusion:** A high prevalence of insomnia was found among college students, with nearly half experiencing sleep issues. Targeted interventions, including sleep hygiene education, stress management, and mental health resources, are urgently needed. Future research should explore insomnia causes and intervention effectiveness in this group.



## Early Clinical Exposure

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**Introduction:** Early clinical exposure was introduced in 2019 as an academic reform in medical education. Still there remains an ongoing debate between different ideologies regarding the benefits and challenges associated with early clinical exposure in medical education. ECE bridges the gap between theory and clinical knowledge and indeed gives the students a first-hand experience of the clinics like patient interaction, following the decorum of the clinic and learning real life skills while applying learnt theory. ECEs help build personality and social skills and etiquette, thus enabling students to build a better doctor patient relationship. The main intent of the research is to assess the credibility of ECE for the learners, and to make the process more streamlined for facilitators. Ultimately stating conclusions through the data analysis through multiple study designs taken from the students.

**Material and Methods:** This study adopts a mixed-methods approach to investigate the impact of Early Clinical Exposure (ECE) on medical students' confidence in clinical skills and to explore the perceived benefits of ECE from their perspective. The research design incorporates both qualitative and quantitative methods to provide a comprehensive understanding. Quantitative data are gathered using structured questionnaires with Likert-scale items to measure students' confidence levels, attitudes, and perceptions of ECE. Complementing this, qualitative data are collected through in-depth interviews, which include open-ended questions designed to capture detailed feedback on students' experiences, knowledge, and attitudes toward ECE.

The target population comprises medical students aged 18–25 who participated in ECE during the 2023–2024 academic year. Descriptive statistical analyses are employed to summarize quantitative data and identify trends in student perceptions, while qualitative data are analyzed using thematic analysis to uncover recurring themes and insights.

**Result:** Most students agree that it predisposed them to the future clinical postings which they face. It equips them with clinical knowledge priming them for better retention and application of knowledge. In brief as per previously conducted research on the same topic, ECE has been an advantage and is in the favour of students and staff and with a few basic improvements in the reform it will be rather more effective. More data and statistics will be added by the end of the research.

**Conclusion:** The study underscores the potential for improving the ECE process through collaborative efforts by students and facilitators. It also enhances understanding of educational reforms like ECE, contributing to more effective clinical training.



## Impact of Sleep Hygiene and Sleep Quality on Mental Health of Indian Medical Graduates

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**Background:** Medical graduates in India often experience poor sleep hygiene and disrupted circadian rhythms due to academic and clinical demands. Poor-quality sleep is associated with impaired learning and memory, worse mood regulation and increased risk of anxiety and depression. Systematic reviews highlights that the pooled prevalence rate of depression was 39.2 % (n=3882), similarly the pooled prevalence rate of anxiety was 34.5% (n=686) among the Indian medical graduates. However, the relationship between sleep problems and mental health in Indian medical graduates remains poorly understood. This study examines the impact of sleep hygiene and quality on anxiety and depression symptoms in this population.

**Materials and Methods:** This cross-sectional study included the phase-I, II & III MBBS undergraduates (n=450) from a private medical college in India. The study ethics were obtained from the Institute human ethics committee of Manipal-TATA medical college. Participants were evaluated for sleep quality, anxiety, and depression symptoms using the structured Pittsburgh sleep quality index, general anxiety disorder-7, and patient health questionnaire-9 questionnaires, respectively. These tools commonly used because of its brevity, ease of administration, and high reliable. Data were presented as proportions, and Spearman's rank correlation was used to assess relationships between sleep quality, and mental health scores.

**Results:** The study included a total of 450 participants, comprising 44.6% males and 55.4% females. The mean age of participants was 21±1.7 years. We found that the poor sleep hygiene was widespread, with 63.3% sleeping 5–7 hours and 15.7% sleeping <5 hours. Anxiety-like symptoms were identified in 372 participants (83.6%) and depression-like symptoms in 393 (88.3%) participants. Total sleep duration was significantly negatively correlated with anxiety ( $\rho=-0.209$ ,  $p=0.00001$ ) and depression ( $\rho=-0.117$ ,  $p=0.014$ ) scores.

**Conclusion:** The study revealed a high prevalence of poor sleep hygiene and anxiety- and depressive-like symptoms among MBBS undergraduates. The reduced sleep duration was significantly associated with the anxiety and depression symptoms of this population.



## Feedback on Curriculum Planning, Implementation, and Evaluation: A Tool for Quality Improvement

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**Background:** Curriculum planning, implementation, and evaluation are backbone aspects of quality assurance in higher education. Feedback from teachers, would form the basis for identifying gaps and making adjustments in curriculum. Purpose of this research study is to find out level of satisfaction among teachers regarding curriculum for continuous improvement of quality education. The objective of the study is to evaluate teachers' perception regarding appropriateness, relevance, effectiveness of curriculum focusing on planning, implementation, and evaluation methods.

**Materials and Methods:** 70 teaching faculty of MBBS(5yrs) were selected based on their teaching methodology in Deccan college of medical sciences, Hyderabad in the year 2021. A structured feedback form was designed with nine statements on different aspects of curriculum, like syllabus extent, theory to practical application balance, relevance to course needs, objectives clarity, evaluation systems, opportunities for internships, research, and employability prospects. Responses were measured on 5-point Likert scale: Strongly Agree, Agree, Neutral, Disagree, and Strongly Disagree. Qualitative insights were sought through additional comments.

**Results:** Preliminary results suggest that feedback on coverage of syllabus was positive, had a good balance between theory and practical. Improvement areas include evaluation system and syllabus extent.

**Conclusion:** Teacher's feedback is a tool of utmost importance in improving curriculum, which should meet educational objectives and societal needs. The mechanism of feedback stresses importance of continuous evaluation toward achieving a dynamic, relevant curriculum. Curriculum evaluation and feedback would be helpful in identifying its strengths and weaknesses, opportunities, and threats of implementing it.

**Keywords:** Curriculum evaluation, quality improvement, syllabus planning.



## Enhancing Collaborative Learning through Sequence Chains in Hospital Administration Education: A Case Presentation

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**Background:** Effective teaching in specialized fields like hospital administration requires bridging theoretical concepts with practical applications to prepare students for real-world challenges. Traditional teaching methods sometimes fail to fully engage students or foster critical thinking among students. To address this, sequence chains, a pedagogical tool that deconstructs complex processes into interconnected steps, were explored as a tool to bridge the gap between theory and practice while promoting active learning and teamwork and enhanced collaborative learning.

**Materials and Methods:** This case involved integrating sequence chains into postgraduate teaching modules on hospital HR recruitment processes. Students conducted pre-class preparation using resources such as e-PG Pathshala and academic texts. In class, they were presented with case scenarios, which they discussed and then collaboratively created sequence chains to map out the activities involved, enabling learners to visualize and evaluate complex operational workflows.

**Results:** The implementation of sequence chains resulted in active student participation, enhanced problem-solving abilities, and improved understanding of practical applications. Feedback indicated that the collaborative nature of the activities fostered peer learning and helped bridge theoretical concepts with real-world scenarios.

**Conclusion:** This case highlights the transformative potential of sequence chains in redefining traditional classroom dynamics by fostering student engagement, critical thinking, and collaborative learning. With its adaptability to other process-oriented disciplines, this innovative approach emerges as a valuable pedagogical tool, particularly for postgraduate education in specialized fields like hospital administration.

**Key words:** Collaborative learning, Sequence Chains, Active learning



### Development of A Module Incorporating Kugellager Technique to Promote Collaborative Learning Among First Year Interprofessional Trainees

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**Background:** Traditionally, undergraduate health professional education focuses on professional specialty, with limited exposure to teamwork which can pose a major hindrance to effective health care management. In many universities, almost all pedagogical activities are taken in silo though there is an opportunity to combine with other health care trainees. Objective of the study is to design, implement and evaluate the effectiveness of a validated Interprofessional education module.

**Methods:** Module was developed and validated using IPE validation checklist (Delphi technique). After a lecture on pancreatic physiology, students were categorized into 3 batches of 60 each which included MBBS and paramedical students in the ratio of 2:1 for SGT sessions. Students during SGT session were divided into two groups of 30 each, For Group A, the module was employed using cooperative learning approach & Students of Group B were assigned module topics for seminar. To evaluate the effectiveness of the module, student's performance was assessed using marks scored in subsequent part completion test. Students' and faculty perception towards the module and overall conduct of the sessions was assessed using validated questionnaires.

**Results:** The scores obtained by the students after module implementation were higher and statistically significant ( $< 0.00001$ ). Improvement scores related to reasoning abilities were found to be higher among students who participated in cooperative learning sessions (3.41+ 2.68) compared to those who participated in Seminar (2.78+ 2.51), (p value  $< 0.14$ ). Majority of them expressed positive vibes towards learning about, from and with each other.

**Conclusion:** Since positive outcomes are reported towards this collaborative approach, a blend of lectures along with such training modules can be considered for optimal accomplishment of competencies by young graduates.



## Medical Undergraduate Students' Perception of Virtual V/S Traditional Small Group Discussion

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**Background:** Different teaching methods like lectures, seminars and small group discussions (SGD) facilitate different kind of student engagement and opportunities to learn in medical education. Considering the circumstances there are times where teaching has to be shifted from offline classes to virtual mode. Taking into account the various impressions of online classes on the participants we intend to find out students' perception about online learning compared to offline SGDs.

**Materials and Methods:** An institution-based comparative cross-sectional study was conducted on 200 phase I Medical students by purposive sampling method. The SGD was conducted in both classroom setting and online Google-meet platform with teacher-student ratio of 1:50 and 1:15 respectively, for over a period of 2 months. Each class was conducted for duration of 2hrs. A questionnaire consisting of 20 multiple choice questions was formed using Google forms. Questions were formulated to evaluate students' perception about virtual and traditional SGD. Data gathered was saved in an Excel spreadsheet. Frequencies and percentages were calculated for the demographics and responses.

**Results:** The impressions of students on virtual as well as offline SGDs were analyzed. Majority of the participants preferred classroom SGDs over online discussions, as they felt better engaged in class with more student-teacher interaction as well as peer interactions. It also helped to develop team-work skills and active learning with less distraction in classroom SGD. Offline SGDs has also helped to recollect the topics discussed more easily and in their overall performance.

**Conclusion:** Online classes has got a lot of benefits making it possible to attend classes from any nook and corner with easy data availability. However, considering the effectiveness, better understanding, individual attention and less distraction with a structured environment provided, offline classes make it more preferable and chosen by students.

**Key Words:** Classroom lectures, human interaction, small group discussion, virtual learning.



## Awareness of Artificial Intelligence Among Doctors and Their Perception About Its Application in Medical Field - A Cross-Sectional Survey

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**Background:** AI represents an advanced form of human brain intelligence, combining fields like biomedical science, computer science, and law. In medical sciences, it serves as a cost-effective diagnostic and therapeutic tool, with applications in oncology, radiology, pathology, genomic analysis, and genetic variation prediction. Its potential to extend across all medical branches presents both opportunities and challenges for healthcare practitioners. Medical schools must adapt curricula to optimize AI's benefits while addressing concerns like ethics, trust, and job displacement. The present study aims to assess doctors' awareness, knowledge, and perceptions of AI in medicine. The Objectives of the study are:

1. Assess awareness of AI among doctors
2. Measure knowledge of medical AI
3. Understand perceptions about its application in medicine

**Materials and Methods:** This cross-sectional online survey involved 150 doctors from an institution, with 100 responses. A validated questionnaire was distributed via Google Forms, collecting demographic information, awareness of AI, perceptions about its medical applications, and willingness to integrate AI into the medical curriculum. Ethical clearance and informed consent were obtained.

### **Results:**

- 89% of doctors recognized AI's role in medicine.
- 71.6% identified at least one practical application of AI in medicine. 60-70% felt AI has significant applications in radiodiagnosis, pathology, and surgery.
- 40% strongly agreed that AI-related subjects should be part of the core curriculum.
- 80% of faculty expressed willingness to engage in AI-related conferences and academic programs.

**Conclusion:** While most doctors are aware of AI, 40% still lack knowledge. Additionally, 40% fear job displacement due to AI. It is crucial to educate healthcare professionals through Continuing Medical Education (CME), workshops, and lectures to address misconceptions and foster AI understanding.

**Keywords:** AI in medical field, medical education, doctors' awareness & perceptions, medical AI applications, curriculum development.



## Effect of Faculty Development Programs on Indian Medical Teachers- A Review

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**Background:** Faculty development programs (FDPs) are important for the professional growth of medical teachers. FDPs such as the Basic Course in Medical Education (BCME)/ Curriculum Implementation Support Program (CISP)/ were introduced by the MCI to train medical teachers. Faculty development brings about a change in teaching, assessment and evaluation programs in any institution. Aims of the study is to evaluate the impact of FDPs on overall teaching quality among trained Medical Teachers (MTs) in India.

**Materials and Methods:** Reviewing articles published on the efficacy of FDPs, especially, BCME and CISP. Eight articles were extracted using “impact”, long-term effects” and “effectiveness” of FDPs as keywords in PubMed and Google Scholar, full review and research articles, published since 2010, in English.

**Results:** Studies have reported subjective impact of FDPs from individualism to community of practice, and a paradigm shift to teaching and assessment, including role modelling. The long-term impact of FDPs have been sparse. Training should be an ongoing process in any medical Institute and evidence needs to be generated by promoting educational research amongst the teachers for the dissemination of the information through appropriate and needed incentives.

**Conclusion:** The long-term impact of FDPs have been sparse, indicating that the training should be an ongoing process. While the NMC Basic course has become compulsory for MTs up to the professor level, it is also recommended to conduct the course for newly appointed faculty twice a year. Kirkpatrick’s program evaluation model showed that the FDPs on new teaching and learning methods significantly improved faculty satisfaction about the teaching environment. There is evidence, in most countries, educators of health professionals are insufficiently prepared as teachers and trainers, even though their clinical knowledge and skills may be good. An analysis of a three-day program for SRs, was conducted, to improve their functioning, by providing new template for supplementing basic workshops for faculty and advocate a change in system. This can give a sound foundation for honing their skills as future faculty. The existing FDPs are insufficient; both in number and aspects they cover, to meet the demand. The need for reiteration in the form of repeated practice, feedback and self-reflection is imperative.



## Evaluation of Cardio Pulmonary Resuscitation Training Program in Second Phase MBBS Students

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**Background:** Cardiac arrest is a life-threatening event and is common in individuals with a pre-existing cardiovascular condition. Studies have shown that awareness of Cardio Pulmonary Resuscitation (CPR) among students, doctors and nurses is very poor. There is a need to train MBBS students for CPR to make them competent doctors. The objectives of the study are to design and implement a CPR training program for second-year MBBS students, evaluate the knowledge and skills they acquire following the training, and analyze the perceptions of both students and faculty regarding the effectiveness and impact of the CPR training program.

**Materials and Methods:** CPR training program was designed and implemented for 100 second phase MBBS students as a part of prospective interventional study. The CPR module consisted of lecture, video-based group discussion, demonstration and hands-on-training on mannikins. Pre-test and post-test were carried out by MCQs and DOPS with score  $\geq 75\%$  was considered as pass and Paired t-test was used for statistical analysis. Feedback was obtained from students and faculty on 5-point likert scale and was analyzed by Descriptive statistics.

**Results:** There was a remarkable improvement in knowledge & skill of students with pass percentage increasing from 0% in MCQs and DOPS to 83% and 96% after training respectively. The mean scores increased from  $30.04\% \pm 13.66$  to  $81.72\% \pm 8.99$ , ( $p < 0.01$ ) in MCQ and from  $26.85\% \pm 15.08$  to  $90.4\% \pm 7.74$  ( $p < 0.01$ ) in DOPS. Most of the students appreciated the knowledge, skill and interactive teaching environment and agreed that it will be useful in future. Also, most of the faculty found that the training increased knowledge and skill of students. But half of them felt that training once will not be enough to make them competent to perform CPR independently.

**Conclusion:** Training of second phase MBBS students to acquire necessary knowledge and skill regarding CPR was very effective and well perceived.

**Key words:** Cardiopulmonary resuscitation, MCQs, DOPS



## Interprofessional Skills in Telehealth Simulation among Health Science Interns: An Observational Study

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**Background:** The integration of interprofessional collaboration (IPC) and telehealth (TH) into healthcare education is a global trend. While developed nations have robust frameworks for IPC and simulation-based learning, India is still in its nascent stages. To bridge the global-local gap, there is a need to explore and integrate IP skills into healthcare education in India. The objectives of the study were to observe interprofessional (IP) skills, including collaboration, role clarity, communication, patient-centered care, teamwork, and conflict management, during TH simulation education among health science interns and to assess the effect of didactic education on TH knowledge.

**Method:** Following ethical clearance (SDUAHER/KLR/CEC/Collaborative project/06/2024-25), 50 interns consented and participated in a two-phase, 3-week training: Phase 1 - flipped classroom with video lectures on TH and IP knowledge and Phase 2 - discharge planning simulation. Ten groups, each with 5 interns (MBBS, BPT, B.ASLP), interviewed a standardized patient which was recorded and analyzed for IP skills through Modified Interprofessional Collaborator Assessment Rubric (MICAR).

**Results:** Paired t-test showed  $p > 0.001$ , indicating no significant changes in knowledge. MICAR scores did not meet expected IP skill levels ( $p > 0.001$ ). Discipline wise MICAR Mean scores ( $\pm$ SD): MBBS:  $4.70 \pm 0.44$ ; BPT:  $3.81 \pm 0.75$ ; B.ASLP:  $3.89 \pm 0.90$ .

**Conclusion:** This study showed no significant changes in TH knowledge levels of the health care interns through a didactic recorded flipped classroom. Participants showed acceptable levels of knowledge in general TH concepts and poor levels in specific TH concepts. Healthcare interns across the 3 disciplines showed below expected levels of IP skills. The participants did not show expected levels of IP through collaboration, role clarity, communication, patient centred care, team work, conflict management during TH simulation activity. The findings of the current study emphasized the inclusion of IP skill training and the need of TH education contextually in the health science curriculum.

**Key words:** interprofessional skills, simulation-based learning, telehealth education.



## Reflective Writing on Lines of Mature Defense Mechanisms Explained Via Fictional Anime/Cartoons in CBME Interns

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**Background:** Reflective writing is a meta-cognitive experiential learning process which is a cornerstone in improving Competency Based Medical Education (CBME). Mature defense mechanisms (MDM) employ healthy adaptive coping strategies which can be integrated with the steps of Gibbs reflective writing explained via fictional anime/cartoon characters. The objectives of the study are to improve the use of mature defense mechanisms among CBME interns and to enhance their reflective writing skills.

**Materials and Methods:** This research proposal will be a pre and post-test interventional comparative study design involving CBME interns divided into two groups. The total sample size required would be around (n=62) with equal number in both the groups (n=31 each). Students consenting for fiction intervention form the Fiction Intervention Group (FIG) and those consenting for non-fiction intervention form the Non-Fiction Intervention Group (NFIG). In pre and post-tests, the defense styles of interns will be assessed using a defense style questionnaire (DSQ) to obtain scores. Also, reflective writing on specific competencies will be taken and peer-assessed using Wald's REFLECT rubrics to obtain scores. Then, the intervention will be done by showing respective YouTube channel videos explaining MDM to interns seated separately in two classrooms over 3 sittings. Immediately after the exposure focused group discussions (FGDs) will be done, moderated by separate faculty.

**Results:** The quantitative data scores will be analyzed with relevant tests based on normality of the data distribution. Within the group and between the groups' comparison would be done for the DSQ and REFLECT scores followed by correlation analysis. The qualitative data obtained in FGDs will be thematically analyzed using QDA Miner Lite software.

**Conclusions:** The alternate hypothesis would be that enhanced MDM would improve REFLECT scores which would be better in FIG than NFIG.

**Keywords:** CBME, Reflective writing, Mature defense mechanisms, Mitsyousocial, Fiction, Anime, Cartoons.



### **A Study to Assess the Effectiveness of Clinical Instructor Mentoring on Stress and Clinical Performance of 1<sup>st</sup> Year Bsc Nursing Students at SDUCON, Tamaka, Kolar**

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**Background:** Clinical Education is a vital part of Nursing Curriculum facilitating the integration of theory into practical skills. High levels of anxiety can affect student's clinical performance and their wellbeing. Mentoring has been one method which can enhance the student's clinical skill and improve their academic performance. Clinical instructors as mentors can help the students by supporting them to complete their academic requirement. In view of this the study was undertaken to assess the effectiveness of Clinical Instructor mentoring on stress and clinical performance of I year BSc Nursing students. The objective of the study is to assess the level of stress among the 1<sup>st</sup> year B.Sc nursing students before and after the administration of Clinical instructors mentoring in experimental and control group and to assess the level of clinical performance among the 1<sup>st</sup> year B.Sc nursing students before and after administration of Clinical instructors mentoring in experimental and control group.

**Materials and Methods:** The research design selected for the study was true experimental research design. The study sample consists of 60 1<sup>st</sup> year B.Sc nursing student of Sri Devaraj Urs College of Nursing Tamaka, Kolar; they were selected by Simple random sampling technique. The tools used were subject data sheet and Perceived Stress Scale. Pretest was conducted by using Subject data sheet and Perceived Stress scale. Clinical Instructor Mentors was allotted to the students. Every week the Clinical Instructor Mentor would meet the students and spend 30 minutes time. The Clinical Instructor supported the mentors by meeting weekly to complete their requirements. Post-test was conducted after 3 months by using the Perceived Stress scale and clinical procedure completion record from experimental and control group.

**Results:** All 1<sup>st</sup> year BSc Nursing students were having the moderate stress in both experimental and (1.92) and control group (2.05). On comparing with pre and post stress test level among 1<sup>st</sup> year BSc Nursing students in experimental and control group, there was a significant difference in the stress scores between these two groups. The highest sub scale stress score was observed with assignments and workload in both pre-test ( 2.48) and post-test (2.46) in control group and also in experimental group for assignments and workload in both pre-test (2.16) and post-test (1.95).

**Conclusion:** It is evident that Clinical Instructor Mentoring reduced the stress among 1<sup>st</sup> year BSc Nursing Students. Clinical Instructor Mentoring will serve as a guideline to decrease the stress and improve the Clinical Practice of Nursing Students.



### Exploring External Examiners' Perspectives on The Objective Structured Practical Examination (OSPE) in Audiology and Speech-Language Pathology Education

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**Background:** The Objective Structured Practical Examination (OSPE) is widely regarded for its structured and objective approach to assessing practical skills in medical education. However, its use in Audiology and Speech-Language Pathology (ASLP) education is underexplored, particularly from the perspective of external examiners. This study evaluates external examiners' perceptions of OSPE, focusing on its benefits, limitations, and its role in standardizing skill-based assessments. The study aimed to assess external examiners' perceptions of OSPE compared to traditional practical examinations and to explore the perceived benefits and challenges of its implementation in ASLP education.

**Method:** A validated questionnaire was developed to collect data on external examiners' perspectives regarding OSPE. This was distributed to 24 eligible external examiners who evaluated Bachelor of Audiology and Speech-Language Pathology (B. ASLP) students at SDUAHER, Kolar, over the past four years. Responses were analyzed to understand examiners' views on comfort levels, objectivity, training needs, and challenges associated with OSPE.

**Results:** A majority of examiners (67%) reported feeling comfortable with OSPE, while 63% agreed that it enhanced objectivity through well-structured stations and checklists. Fifteen respondents strongly agreed that OSPE offers a more systematic assessment than traditional formats, and 14 considered it a fairer approach to evaluating practical competencies. However, several challenges were noted, including logistical constraints (79%), time and resource limitations (59%), and the need for training (50%). Despite these challenges, 59% of the examiners were highly favorable toward using OSPE in future assessments, and all respondents recommended its adoption in other institutions. Moreover, 92% expressed interest in receiving training on OSPE methodology.

**Conclusion:** External examiners acknowledged OSPE as an effective, objective, and fair method for practical assessments in ASLP. Addressing challenges such as logistical issues and examiner training could further enhance its utility and facilitate broader implementation in allied health education.

**Keywords:** OSPE, Audiology, Speech-language Pathology, B.ASLP



## Enhancing Learning for First-Phase MBBS Students: Flipped Classroom vs. Traditional Methods

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**Background:** With the introduction of the Competency-based medical education (CBME) curriculum in the medical curriculum, there has been a paradigm shift to more interactive classes from the traditional didactic lectures. Flipped classroom is a strategy that reverses traditional learning by delivering core content outside of the classroom and moving activities more traditionally thought of as 'homework' into the classroom. This study aimed to determine the effectiveness of flipped classrooms and to study students' perceptions of flipped classrooms.

**Methods:** After ethical clearance, 80 first-phase students were included in our study. They were divided into groups (A, B, C, D) of 20 students. Groups A and B were exposed to didactic lectures, and groups C and D were assigned flipped classes. Students absent in either class were excluded from the study. All the study group students were sensitised and explained about the study course. Pre-reading material was given to the students 1 week before the flipped class, which they had to prepare and come to the class, and in the class, there was only interactive discussion on the topic. Pre-test and post-test were conducted before and after both didactic class and flipped class and statistically analysed using unpaired t-tests. The perceptions of the students were collected through a Google questionnaire.

**Results:** The post-test marks of the flipped class ( $4.45 \pm 1.03$ ) were significantly higher (p-value  $\leq 0.025$ ) than the post-test marks ( $3.92 \pm 1.51$ ) of the didactic lecture class. The student's perception was also in favour of the flipped class.

**Conclusion:** The flipped class involves the active participation of students and encourages higher-order thinking. It can be adopted to make the MBBS students self-directed and lifelong learners.

**Keywords:** Flipped class, didactic lecture, CBME



## Clinical Case Presentations: Bridging Theory and Practice in Puberphonia Education for BASLP Students

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**Background:** Clinical-based learning (CBL) is essential in healthcare education for integrating theoretical knowledge with real-world practice. Clinical case presentations (CCPs) are effective tools in fostering diagnostic reasoning and practical skills. Despite their established benefits in medical education, limited research evaluates their impact on speech and hearing education, especially in enhancing diagnostic and therapeutic skills for disorders like puberphonia. This study aimed to evaluate the effectiveness of CCPs in improving BASLP students' diagnostic understanding, treatment awareness, and integration of complementary techniques in managing puberphonia.

**Materials and Method:** A pretest-posttest design was employed with 46 BASLP students from the Department of Speech Pathology and Audiology, including 22 first-year students (n=22) introduced to CCPs for the first time. A structured questionnaire, administered via Google Forms, assessed baseline knowledge and post-CCP learning outcomes. The CCP covered puberphonia's diagnostic features and therapeutic approaches, including complementary techniques like yogic practices.

**Results:** Before the CCP, 25% of students, all from the first-year program, were unfamiliar with CCPs as a learning tool. Additionally, 24% (n=46) lacked awareness of complementary techniques for puberphonia. Post-CCP responses revealed significant learning gains, with 80% reporting improved awareness of CCPs and their importance in learning clinical diagnosis and management for various disorders ( $p < 0.05$ ). Among second- and third-year students (n=24), there was a significant improvement in understanding treatment options for puberphonia ( $p < 0.05$ ). Overall, 86% acknowledged increased awareness of complementary techniques ( $p < 0.05$ ). Excluding first-year students, 94% (n=24) felt CCPs strongly influenced their approach to voice disorder cases, and 60% agreed that CCPs bridged the gap between theoretical knowledge and innovative practices.

**Conclusion:** The study highlights CCPs as effective educational strategies for enhancing BASLP students' understanding of puberphonia, its management, and the role of complementary techniques. By bridging theoretical knowledge with clinical application, CCPs foster comprehensive and innovative approaches to voice therapy, equipping students with practical skills essential for real-world scenarios.

**Keywords:** clinical case presentations, puberphonia, complementary techniques, voice therapy, clinical-based learning.



### Effectiveness of Peer Mentoring Versus Traditional Mentoring on Academic Performance Among B.sc Nursing Students at Selected Nursing Colleges, Kolar

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**Background:** National education policy 2020 introduced competency and outcome-based curriculum using innovative educational approaches. In that different learning models have been discussed and one of which is peer mentoring. Peer mentoring is a complex process by which students learn from another student who are more experienced and knowledgeable on subject matter. Hence the study was undertaken to know the effectiveness of peer mentoring versus traditional mentoring on academic performance among nursing students.

**Methods:** The design used for this study was experimental post-test only control group. Using purposive sampling technique 68 students from SDUCON were provided peer mentoring and 25 from ETCM CON were provided traditional mentoring. Then both groups were assessed using student performance checklist.

**Results:** The results showed that, the mean score of peer mentoring was 13.2 whereas the mean score of traditional mentoring was 8.8 the p value is <0.001 it is significant at 0.05 level, indicating that peer mentoring was effective than the traditional mentoring

**Conclusion:** The study concluded that, the peer mentoring program significantly improved self-confidence, reduced stress level and enhanced academic progress among nursing students when compared to traditional mentoring.

**Key words:** effectiveness, traditional mentoring academic performance, nursing students.



### Evaluation of Perceptions of The Faculty and Students Towards CBME: Quantitative Study in A Medical College

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**Background:** NMC has reformed the medical education by introducing Competency-based medical education (CBME). The faculty & students are witnessing the changes and are getting acclimatized to it. This study evaluates the perceptions of the faculty and students towards CBME implementation.

**Materials and Methods:** Using Google form two separate pre-validated questionnaires were prepared and circulated through WhatsApp to the faculty (n=140) and students (n=600). 42.9% faculty and 70.7% students responded and their perceptions were recorded on a 3-point Likert scale. The data collected was analysed by calculating the percentage of response.

**Result:** Majority of the faculty and students have a positive outlook towards CBME and all its newer concepts like FC, ECE, AETCOM, family adoption and mentorship programs, alignment-integration, electives, skill lab, the newer teaching-learning methods and assessment methods. However, they have opined that the basic principles of CBME have to be better upheld for its satisfactory implementation in the institute.

**Conclusion:** NMC has laid out a wonderful curriculum and the MEU of the colleges are training the faculty to get acclimatized to it. Though CBME is welcomed as a major reform it is not foolproof because of the innate challenges. Assessment and governance of its implementation in the institute is needed to pave the way to betterment with the necessary corrective measures. Development of a curriculum gap analysis framework for CBME implementation is an absolute need which can be used for curriculum development by addressing the gaps and facilitating an interface between all stakeholders to pursue the national goal i.e 'Health for all' by creating proficient 'Indian Medical Graduates'.

**Keywords:** Competency-based medical education, implementation, faculty and medical students, quantitative study.



## Introduction of Module-based Training on Dental Ergonomics among post graduate students in a Dental College and Hospital of Mysore, India

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**Background:** Among dental workers, musculoskeletal disorders (MSD) are very common. The MSDs are described as soft-tissue injuries that can affect the nerves, tendons, muscles, joints, and cartilage in the limbs, neck, and lower back and are brought on by prolonged or abrupt repetitive movements, vibration, force, and awkward positions, according to the CDC (Center for Disease Control) and NIOSH (National Institute of Occupational Safety and Health). Aim: To develop, introduce and evaluate a structured, validated module on Dental Ergonomics for postgraduate (PGs) students in a Dental College and Hospital of Mysore, India.

**Materials and Methods:** A quasi-experimental, educational intervention study was conducted in the Department of Prosthodontics, at JSS DENTAL College and Hospital, from March to September 2024. A structured and validated Dental Ergonomics module was developed to post graduate students (PG, n=36) over 6 months. The content validity were rated on a scale of 1-4 by 10 experts favoring face validity of the module Feedback from the faculty (n=6), and the PGs (n=36) were collected using Likert scale ratings and open-ended questions. The trained cohort of PGs was also assessed on Dental Ergonomics using participatory training.

**Results:** Thirty-five students Post graduate students (n = 35) participated in both pretest and posttest. There were statistically significant changes in participants' ergonomic strategies. The mean scores decreased substantially, with p-values ranging from 0.003 to 0.042, indicating that these changes are statistically significant. The overall mean score dropped from 26.88 in the 1st evaluation to 16.97 in the 2nd evaluation with a highly significant p-value of <0.0001, suggesting a consistent and notable decrease in retaining poor ergonomic protocols among the participants

**Conclusion:** The development and delivery of a structured training module on Dental ergonomics for PGs improved the knowledge and skills. Both the faculty and the PGs were satisfied with the module.



### Study of Intraocular Pressure in Different Grades of Myopia in the Age Group of 18 to 25 Years

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**Background:** Blindness is one of the major health hazards in the present world. Cataract & Glaucoma being the major causes of such blindness especially in developing countries like India. Myopic refractive error is a common ocular disability that is becoming the new imminent pandemic threat, along with the early age of its onset, leading to significant years of life lived with this disability and various complications arising out of it, glaucoma being one of them. Elevated intraocular pressure (IOP) is an important and only correctable risk factor for the development of glaucoma. The Objectives of the study were to establish the correlation between myopia and Intraocular pressure and to find out any effect of severity of myopia on Intraocular pressure.

**Materials and Methods:** 110 patients in the age group of 18 to 25 years with myopic refractive error attending the ophthalmology OPD at KIMS, Hubballi, were selected. After getting informed consent, the patients were categorised into Low (-0.25 D to -2.75 D), Medium (-3 D to -5.75D) and High myopic groups ( $\geq -6$  D). IOP was measured by Goldmann applanation tonometer.

**Results:** Right eye IOP of high myopes is higher when compared to the IOP of right eye low and medium myopes ( $F=9.352$ ;  $p<0.05$ ). Left eye IOP of high myopes is higher when compared to the IOP of left eye low and medium myopes ( $F=7.497$ ;  $p<0.05$ ). There was a positive correlation between number of years since myopic refractive error and IOP (right eye  $r = 0.359$ , left eye  $r = 0.407$ ;  $p<0.05$ )

**Conclusion:** The study suggests that regular monitoring and recording of IOP is crucial in routine ocular examinations for the prevention of raised pressure and its associated complications.



## Students' Perceptions on Case-Based Learning

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**Background:** Case based learning (CBL) is a newer modality in medical education where learners see the relevance and are actively engaged in the topic under study. Students getting exposed to different kinds of cases relating to the respective topic learnt makes them dig deep into the concepts and acquire better knowledge. CBL is a technique which links theory to practice, through the application of knowledge to the cases, using inquiry-based learning methods. It promotes self-directed learning, clinical reasoning, clinical problem solving, and decision making by providing repeated experiences in class and by enabling students to focus on the complexity of clinical care. The goal of CBL is to prepare students for clinical practice using authentic clinical cases. The stories within case studies serve as a means by which learners form new understandings through characters and/or scenarios. The aim of the study to understand how linking acquired knowledge over a subject with practical cases (Case-Based Learning) impacted students in the learning process.

**Materials and Methods:** Assessment of the above objectives will be done by taking feedback from students who have had Case-Based Learning inculcated in their Phase I MBBS. Students will be questioned based on the routine study patterns, modes of learning, tools used, learning using examples, and whether they were able to correlate the cases with the pre-acquired knowledge over a topic. Level of understanding before and after introducing CBL will be assessed to know the efficacy of this method.

**Result:** The results of the survey conveyed that more than 85% of the students found Case-Based Learning effective during their Phase I MBBS. CBL helped them enhance skills like self-directed learning, clinical reasoning, clinical problem solving, and decision making.

**Conclusion:** To conclude, majority of the students favoured CBL method since it helped them approach the subject in a better way using critical thinking and problem solving. It also equipped them with skills to provide comprehensive and complete care in different clinical situations.



### **Bridging the Gap: Exploring Challenges in Interprofessional Communication Among Healthcare Professionals: A Qualitative Study**

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**Background:** In the rapidly evolving and complex landscape of modern healthcare, effective communication among different health care professionals is not just a skill but a cornerstone of high-quality patient care. With healthcare systems becoming increasingly multidisciplinary, the ability of healthcare professionals to collaborate seamlessly across roles and specialties has never been more critical. However, despite its importance, Interprofessional communication often faces barriers such as hierarchical structures lack of training in collaborative practices etc. These challenges can lead to fragmented care, increased medical errors, and poor patient outcomes. In an era where patient safety and satisfaction are paramount, addressing these communication gaps is the need of the hour. This study delves into the dynamics of Interprofessional communication, its challenges, and strategies to enhance collaboration among healthcare teams. The Objectives of the study were to understand the communication challenges faced by health care professionals during patient doctor interactions and to understand the communication challenges faced by patients during patient doctor interactions

**Materials and Methods:** A Focus group discussion /indepth interviews were conducted among different disciplines of health care professionals like Homeopathic consultant, Physicians, Surgeon, Paediatricians, Nurses, Homoeopathic pharmacists, Technicians, Receptionists, House-keeping staff, other professions like Legal expert, Soft skill experts, and Patients along with their Care takers . The data was analysed into using QDA miner lite software

**Results:** The findings of the study strongly suggests that Body language plays a major role in effective communication with the patients and their relatives/caregivers followed by the ability of the consultants and other health care providers to listen to the patients , clarity ,patience , being empathetic, gaining the trust of the patient both by verbal and non-verbal communication.



### Enhancing Learning Through Creativity: Harnessing Worksheets for Collaboration, Engagement and Deep Learning

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**Background:** The gen Z learners are more in need of creative and innovative teaching strategies essential for deep learning notably in difficult subjects. Creative worksheets as tools to enhance student engagement remains unexplored, particularly in medical education. This study addresses this gap by experimenting with this novel method to assess its effectiveness. The Objectives of the study were to evaluate the effectiveness of creative worksheets on knowledge retention in phase 1 students through MCQs and to assess student perceptions regarding the learning strategy using feedback.

**Methods:** This is an observational study. After getting the Institutional Ethical Committee clearance, informed written consent got from students of phase 1 who were the study population. Out of 150 students, 140 completed the study. They were divided into 2 groups – Group 1 and Group 2, randomly. The content was Respiratory physiology divided into 3 portions of equal difficulty level A,B and C. Two similar worksheets were created- worksheet1 from content A and worksheet 2 from content B. Students in group 1 given worksheet1 and Students in group 2, worksheet 2. Students were asked to discuss and work collaboratively and submit the completed worksheets after 2 days. 10 days later, assessment of all students done using 40 MCQs, 10 questions each from worksheet1 and worksheet 2 and 20 questions from content C.

**Results:** Both groups performed better on MCQs related to their assigned worksheet content compared to other questions. Kruskal Wallis test –SPSS showed statistical significance Group 1(Odd):  $p=0.505$  and Group 2 (Even):  $p=0.0116$ . This demonstrated improved knowledge acquisition and retention in worksheet related topics. Analysis of Student feedback about their perception using 5-point Likert scale showed that 95% students felt it helped them better understand the subject, helped clear misconceptions, 94% said they enjoyed the collaborative activity.

**Conclusion:** Creative worksheets: effective tool for medical education, Benefits both performance and engagement, can be considered as potential tool for integration into curriculum

**Key words:** Keywords: Medical education, physiology, creative learning, worksheets, student engagement, collaborative learning, innovative teaching



## Collaborative Learning in Medicine-Benefits of Peer-Assisted Learning

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**Background:** Topping defined PAL as the process which takes place when people with similar background, but who are not educators, work together and teach one another in order to understand certain topics. Giving them greater responsibility, promote active involvement. Despite benefits of PAL uncertainty prevails about its effectiveness & impact on students' learning. This research studies behavioural patterns, different perceptions and impact on learning associated with PAL. To analyse the effectiveness & perception of PAL in learning among medical students.

**Materials and Methods:** Study participants were 2<sup>nd</sup> MBBS students. Study design was Qualitative & Quantitative and Prospective. Sampling type was purposive and minimum sample size was 98 adjusted to 100, Didactic lecture was conducted on important & conceptual topics. Each topic was sub divided & faculties were sensitized for PAL Each PAL session was planned in 4 batches, 6 students tutors were selected by simple random sampling method with specific topics (2 sessions). Faculty checked preparedness of each student tutor & supervised the sessions. Pre & post test were conducted in the form of 10 multiple choice questions through Google forms. Link was sent through whatsapp group. After a week, survey with validated questionnaire(5point Likert scale) was conducted on 100 students via Google forms. Statistics: Descriptive analysis, values are presented in %ages. For comparing results of pre & post test Paired student's T test was used.

**Results:** The survey on effectiveness indicated by pre test & post test was highly significant. 48% of students strongly agree that PAL has enhanced their understanding. 68% & 48% of students apply theoretical knowledge in clinical application & critical thinking excellently respectively. 52% highly comfortable to discuss ideas & doubts with peers respectively. Challenges in PAL were time constraints, fear of rejection & communication skills. 90% of students recommend PAL to be continued further & 76% reported that PAL should be integrated into the MBBS curriculum in all phases.

**Conclusion:** This unique learning strategy is mutually beneficial achieved by promoting active engagement of learners.

**Keywords:** peer assisted learning, Medicine, undergraduate, curriculum



### Educational Model to Prepare an Indian Medical Graduate (IMG) for Providing Dietary Counseling to A Patient Of Metabolic Syndrome

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**Background:** Metabolic syndrome (MS) directly increases the risk of cardiovascular disease and related mortality. The pooled prevalence of MS among adult females and males in India is 35% and 26% respectively. Recent evidence suggests dietary modification has significant role in treatment of metabolic syndrome. Globally medical students are not supported to provide high quality, effective nutrition care. There is an urgent need to strengthen nutrition education among medical students in India. The study was done with an objective to make a final MBBS phase 1 medical student competent to counsel a patient of metabolic syndrome about dietary modification in an empathetic, understanding and non-judgmental way in a simulated environment.

**Methods:** The study was done a medical college of North India from April to December 2021. It was a cross sectional Interventional study with mix study design. 100 medical students of final MBBS phase 1 were included in the study. To make a student competent for diagnosis of metabolic syndrome the lectures were taken by faculties of anatomy, physiology and biochemistry. To enhance the counselling skills of students lecture and role plays were done by psychiatrist. Demonstration of raw food articles and impact of cooking and portion size was done by dietician. The students were analyzed before and after intervention using objective structured Clinical Examination (OSCE).

**Results:** Total 100 students of final MBBS phase 1 participated in the study. Pretest and post-test included OSCE scores of 30 students selected randomly. Average pretest and post test scores were 13.45 and 14.64 respectively. The difference was found to statistically significant with p value 0.007 after using paired t test.

**Conclusion:** Vertical Integration of the dietary counselling skills can be done to improve patient compliance, disease outcome and better doctor patient relationship.

**Key words:** Metabolic syndrome, Medical Education, Diet, Vertical Integration



### **A Methodological Study to Develop a Teaching Efficacy Scale (TES) and Evaluate The Developed Scale for Evaluating Clinical Nursing Instructions Given by Teachers Working In Selected Nursing Colleges of Northern India**

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**Background:** Teaching in the clinical environment is a demanding, complex and often frustrating task. The clinical nursing instructors get sometimes too busy to demonstrate and supervise students as per standard guidelines. Also, the abilities of clinical teachers differ largely. More-over there is acute shortage of experienced nursing instructors affecting overall learning of students in clinical area.

**Materials and Methods:** The study has been carried out in different phases.

1. Preliminary preparation of Teaching Efficacy Scale (TES)
2. Validation of TES through Delphi Technique and factor analysis
3. Ethical Clearance was obtained.
4. Final try out to assess the feasibility and validity of TES and pre-test the scale for language and sequence of items. The TES was administered to students of B Sc. 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> year who had just finished their clinical posting.

**Result:** The result of study indicated that the language of items in TES were clear and understandable. Therefore, all the items were retained without any modification in the final draft of TES. Content Validity Index value was 0.87. Cronbach's alpha value ranged between 0.6-0.9 for all sub domains.

**Conclusion:** The content, face and construct validity of developed scale (TES) was found to be adequate to ensure its effective usage for evaluating clinical nursing instructions.



## Enhancing Student Engagement through Active Teaching-Learning Approaches among First-Year MBBS Students

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**Background:** Active teaching-learning methods involve engaging students directly through activities like discussions, group work, and problem-solving, in contrast to traditional lecture-based approaches. This study evaluated the impact of active teaching-learning on engagement and learning outcomes among first-year MBBS students.

**Methods:** A cross-sectional survey was conducted among 113 first-year MBBS students (response rate: 76.9%) using a faculty-validated questionnaire (Cronbach's alpha = 0.873). The questionnaire included Likert-scale and open-ended items to assess perceptions of active learning strategies. Data were analyzed using SPSS v16.

**Results:** Of the 113 participants, 59 (52.19%) were males, and 54 (47.81%) were females. Most students (63.63%) were aged 20–22 years. Active teaching methods enhanced engagement for 79.7% of students, while 54.8% reported improved critical thinking through self-directed learning. Active methods were perceived as more effective for information retention (75.2%) and academic performance (79.6%). Additionally, 83.2% acknowledged their role in fostering clinical reasoning skills, and 74.4% supported integrating these strategies to improve professional exam performance. Common themes included the need for balanced integration of active and traditional methods, emphasis on interactive sessions, and a preference for real-life clinical case discussions. These following findings serve as a blueprint for curriculum modifications aimed at aligning medical education with contemporary needs: Activities like group discussions and interactive sessions could be introduced in foundational subjects to improve engagement and understanding. Self-directed learning modules and problem-based learning (PBL) sessions could encourage critical thinking and clinical reasoning skills. Incorporating formative assessments linked to active strategies can improve retention and application of knowledge.

**Conclusion:** Active teaching-learning methods enhance engagement, critical thinking, and clinical reasoning while improving academic outcomes. These findings emphasize the need for integrating active strategies into medical curricula despite challenges such as resource limitations and student adaptability.

**Keywords:** *Active Learning, Medical Education, Student Engagement.*



## Introducing Electives for MBBS Students: A Pioneering Experience at a New Medical College

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**Background:** Integrating electives into the MBBS curriculum offers students the chance to explore a variety of medical specialties, engage in research, and acquire skills beyond core medical sciences. This initiative aligns with the National Medical Commission's (NMC) competency-based medical education (CBME). This study aimed to document the experience of implementing electives, focusing on innovative approaches and insights gained from student and faculty feedback at multiple levels.

**Methods:** The study used a descriptive, qualitative design to capture the implementation process and evaluate the program's effectiveness across the four levels of the Kirkpatrick Model: *Reaction (Level 1)*: Students provided immediate feedback through structured surveys and focus group discussions. Faculty noted positive responses to program organization and student engagement. *Learning (Level 2)*: Preceptor-designed assessments and reflective logs were used to evaluate knowledge and skill acquisition. Students reported gaining insights into interdisciplinary topics, such as: Artificial Intelligence in healthcare, Music therapy, Yoga therapy, Occupational health at industrial sites, Sleep medicine (NIMHANS experience). *Behavior (Level 3)*: Post-elective surveys and faculty observations captured how students applied their new skills and knowledge in clinical, community, and research settings. *Results (Level 4)*: Described under the section 'Results' below.

**Results:** The program demonstrated institutional benefits, including enhanced student-faculty interaction, and improved curriculum planning. The electives fostered critical thinking, research skills, and interpersonal abilities, contributing to a robust CBME framework.

**Conclusion:** The elective program implementation effectively even in a new medical college is a welcome approach. The Kirkpatrick model ensured measurable outcomes, supported continuous improvement in medical education, and helped prepare students for diverse roles in healthcare under the NMC's new curriculum initiatives.



### **From Surface to Scan: Empowering First-Year MBBS Students with Radiology and Surface Marking Competencies through Entrustable Professional Activities**

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**Background:** Entrustable Professional Activities (EPAs) represent a competency-based framework that ensures medical students achieve essential skills required for clinical practice. Introducing radiology and surface marking as an EPA in the first-year MBBS curriculum aims to build foundational competencies in anatomical localization and its clinical applications through imaging techniques and surface marking methods. The objectives of the study is to design and implement an EPA for first-year MBBS students focusing on radiology and surface marking, with the objective of enhancing competency in anatomical localization, clinical application, and early integration into clinical practice.

**Materials and Methods:** The Entrustable Professional Activity (EPA) focused on integrating radiology and surface marking, encompassing definition, training, and assessment components. The activity involved understanding basic imaging modalities such as X-ray, CT, and MRI, alongside identifying key anatomical structures, and accurately localizing anatomical landmarks on the body surface. Training modules included didactic lectures on radiological imaging principles and surface anatomy, practical sessions with hands-on training for surface marking on peers and mannequins, and integration of radiology to correlate surface markings with real-time images. The assessment framework comprised Direct Observation of Procedural Skills (DOPS) to evaluate surface marking accuracy, image interpretation tests to assess radiology competencies, and feedback and self-reflection activities to build confidence in performing the EPA effectively.

**Results:** Post-EPA implementation, 80% of students achieved the "ready to perform under supervision" entrustment level in surface marking and radiological image interpretation. Pre- and post-EPA assessments revealed a significant improvement in knowledge and skills ( $p < 0.001$ ). Qualitative feedback highlighted the relevance of the EPA in understanding anatomical localization and its clinical applications. Challenges included variability in student proficiency and limited exposure to advanced imaging modalities.

**Conclusion:** The EPA on radiology and surface marking successfully enhanced first-year MBBS students' competencies in anatomical localization and its clinical application. Future iterations of this EPA could include simulation technologies and competency tracking to further refine the entrustment process.

**Keywords:** Entrustable Professional Activity, Radiology, Surface Marking, Competency-Based Medical Education, MBBS Curriculum



## Development of an Interprofessional Education Module for Cost-Conscious Periodontal health Care

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**Background:** Rising health care costs have created an urgent need to improve students' knowledge on health care costs for providing cost-conscious care. Interprofessional education (IPE) appears particularly appropriate for creating awareness regarding cost-conscious Periodontal health care among undergraduate medical and dental students. The objective of the present study was to develop an interprofessional educational module regarding cost-effective periodontal care.

**Materials and Methods:** 283 Medical and dental interns participated in this study. The study was divided into 3 phases.

Phase 1: Need Assessment - Qualitative approach- Focus group discussion was performed among 28 medical and dental students to understand the need for Interprofessional educational module(IPE) for cost-conscious periodontal health care.

Phase 2: Development of IPE module - Content validation was done with 9 subject experts. The module was developed in collaboration with medical and dental specialists. It was a 3-month program induction based, with simulation exercises, didactic lectures on periodontal cost care, awareness regarding cost-effective practice.

Phase 3: Assessment of effectiveness of the module - We assessed Interprofessional Professionalism assessment score and developed Interprofessional module for Undergraduate medical and dental students.

**Results:** Pre and post test score showed statistical significant difference post module exposure. The module was delivered in a span of 3 months and evaluation was done Immediately and 1 year follow up .

**Conclusion:** Cost-conscious dental treatment for periodontal health care can help in educating both medical and dental students towards holistic health care approach

**Key words:** Interprofessional, cost-conscious, periodontal diseases ,periodontal care, oral health



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*Abstracts of oral presentation*



## Analyzing the Indications of Lower Segment Caesarean Section According to Robson's Classification Performed at Urban Health Centre, Chittaguppi Hospital, Hubballi

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### ABSTRACT

**Background:** Caesarean Section is a major life-saving obstetric surgery used when a vaginal delivery is considered too risky and to avoid maternal & perinatal mortality and morbidity. The number of cases has increased alarmingly in the last few years. To understand the major contributing factors, we have chosen Robson's Classification to identify the major determinants influencing the increase in number of cases.

**Objectives:** To identify and analyze the most common indications for LSCS in an urban health centre.

**Materials and Methods:** Data is collected retrospectively from the parturition and OT register of the hospital. This includes 668 women who have undergone lower segment cesarean section in the Chittaguppi Hospital Hubli, Karnataka from January 2024 to June 2024 by using Robson's Classification.

**Results:** Out of 668 deliveries, 571 are Vaginal delivery and 97 are LSCS. The overall cesarean section rate during the study period was 14.52%. According to Robson's classification, 51.51% comprised of Group-5 (previous LSCS), 22.7% of Group-2 (Nulliparous, cephalic not in Spontaneous labour), 16.4% of Group-1 (Nulliparous, cephalic in Spontaneous labour), 6.185% of Group-4 (Multiparous not in Spontaneous labour), 3.09% of Group-6 (Nulliparous single Breech).

**Conclusion:** The most common indication was found to be Previous LSCS. This study provides valuable insights into the most common indications for LSCS in an urban health centre. The findings underscore the importance of enhancing antenatal care and clinical decision-making to reduce unnecessary caesarean sections while ensuring maternal and fetal safety.

**Key Words:** Previous LSCS; Breech Presentation; Robson's Classification; Cephalopelvic Disproportion.



**Cytomorphological Patterns of Palpable Breast Lesions on Fine Needle Aspiration Cytology & It's Histopathological Correlation**

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**ABSTRACT**

**Background:** Worldwide, breast cancer is most frequent cancer among women. According to Globocan 2020, in India breast carcinoma represented, 13.5% of all cancer cases and 10.6% of all deaths. Assessment of breast mass by clinical examination might be a challenging task. Hence, the primary test fineneedle aspiration cytology (FNAC) was introduced. Reporting format for breast lesions recommended by The International Academy of Cytology (IAC) Yokohama is useful in assessing optimal way to manage breast lump & avoiding unnecessary surgical procedures.

**AIMS:** To categorize cytomorphological patterns of palpable breast lesions on FNAC as per IAC Yokohama system and its histopathological correlation (wherever available).

**Methodology:** Clinical data and cytology smears of breast lesions diagnosed from June 2022 to July 2024 were retrieved. All the cytology smears were reviewed and reclassified to one of the five categories as per IAC Yokohama. Sensitivity, specificity, positive predictive value, negative predictive value, and diagnostic accuracy of FNAC to detect malignant lesions were calculated considering HPE as the gold standard.

**Results:** Among 285 cases, the spectrum of breast lesions showed, 218 cases of benign category, 31 atypical category, 3 suspicious category, 32 malignant category and 1 case was unsatisfactory. Statistical analysis showed the sensitivity of 100% and specificity of 98.4% with the positive predictive value of 99.5% and negative predictive value of 100% .

**Conclusion:** FNAC is an economical and valuable diagnostic tool. The overall diagnostic accuracy in the present study was 99.6%. These findings reflect positive contribution of Yokohama system towards accurate diagnosis and helps clinicians in specific management decision.

**Keywords:** Breast lesions, FNAC, Yokohama, Cytomorphology.



**Monsoon's Hidden Heat; Unveiling Acute Undifferentiated Fever Trends:  
Hospital Based Cross Sectional Study**

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**ABSTRACT**

**Background:** The incidence of acute undifferentiated febrile illness (AUF) increases during the monsoon season in tropical countries. In Asia, often caused by malaria, dengue, leptospirosis, and rickettsial diseases, with undiagnosed cases ranging from 8% to 80%. Understanding local causes and seasonal patterns is essential for effective control measures. This study aimed to identify the aetiology of AUF and the prevalence of multiple infections.

**Aim:** To study the clinical and laboratory profiles of AUF patients during the monsoon season.

**Material and Methods:** This hospital based cross sectional observational study was conducted in a tertiary hospital in North Karnataka. All adult patients presenting with AUF of <14 days duration were evaluated for etiology, and differences in presentation and outcome were analyzed.

**Results:** Average patient age: 42.6 years (range 18-85), with 62.5% male and 35.7% female. Fever was the most common symptom (80.4%), then diarrhea (71.66%). Others included vomiting, headache, and myalgia (19.6%). Dengue was most frequent infection (51.6%), followed by Salmonella (21%) and mixed infections (21.6%). Malaria in 3.3% and leptospirosis in 1.6%. Dengue cases peaked in August, while mixed infections common in July, particularly dengue with enteric infections. Complications included acute kidney injury (6%), respiratory distress (0.33%) and severe thrombocytopenia (16.6%). Treatment involved doxycycline and metronidazole, with an average hospital stay of <7 days (91.66%) and mortality rate of 1.66%.

**Conclusion:** Diagnosing and treating AUF requires comprehensive approach due to diverse aetiological agents and similar clinical presentations. Early diagnosis and intervention can reduce morbidity and mortality.

**Keywords:** AUF, Dengue, Scrub typhus.



**The Prescribing Pattern of Antimicrobial Agents In Adult Population Using Who Aware Classification In A Tertiary Care Hospital**

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**ABSTRACT**

**Background:** Antimicrobial resistance (AMR) is a major public health problem and death due to AMR is projected to be 10 million by the year 2050. Antimicrobial Stewardship Programme (AMSP) is associated with the surveillance of AMR. The WHO in 2017 classified essential antimicrobials into 3 groups; Access, Watch and Reserve in increasing order of their potency to cause AMR. The vital role played by the AMSP and the AwaRe classification of antibiotics in preventing AMR is highlighted through this study.

**Materials and methods:** 103 adult patient prescriptions containing antibiotics of various departments were collected for audit. The doctors' responses regarding the knowledge and practice of AwaRe classification were assessed.

**Aim:** 1. To determine the prescribing pattern of antimicrobials among clinicians using AwaRe classification

2. To assess the knowledge and attitude of clinicians regarding the AwaRe classification.

**Results:** Among the 182 prescriptions, 103 were antibiotic prescriptions with 26 different antibiotics. 27.18% and 72.82% of the prescriptions were from the OPD and IPD respectively. 34.61%, 84% and 11.53% of the antibiotics belonged to the access, watch and reserve groups respectively. Doxycycline and Ceftriaxone were the most common antibiotics prescribed by the Medical and Surgical Departments respectively. Majority of clinicians had knowledge regarding the AwaRe classification of antibiotics and importance of AMSP. They agreed that indiscriminate use of antibiotics causes AMR.

**Conclusion:** The watch group antibiotics were more prescribed than access and reserve groups. It was also noticed that most of the doctors had adequate knowledge regarding the importance of AMSP.

**Keywords:** Antibiotic, AwaRe, Antimicrobial Resistance, Antimicrobial Stewardship Programme.



## Indoor Air Pollution Among Rural Households – A Cross Sectional Study

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### ABSTRACT

**Background:** For many developing countries, Indoor air pollution (IAP) is still one of the largest environmental problems as many do not have access to clean fuels for cooking. IAP could be from burning of solid fuels such as crop waste, dung, charcoal and coal for cooking and heating in households. Objective of the study was to assess Indoor air quality among rural households

**Methodology:** The present study was a community based crosssectional study carried out for a period of 2 years. Rural households using solid fuel were included and locked houses were excluded from the study. To assess Indoor air quality, Temtop Airing-1000 2<sup>nd</sup> Generation Professional Laser Air Quality Monitor which assess Particulate Matter PM 2.5, PM10 Particles, CO<sub>2</sub>, HCHO, Temperature and Humidity was used. Nitric oxide (NO) and Sulphur dioxide (SO<sub>2</sub>) was measured by Honeywell BW Solo single gas detector tool.

**Results:** 812 residents took part in the study. With respect to external environment, 632 (77.8%) had independent access to a street from their household, 624 (76.8%) had there households nearer to nuisances such as smoke. With respect to internal environment , 688 (84.7%) were staying in pucca house, 716 (88.2%) houses were not plastered, 684 (84.2%) had more than 1/5<sup>th</sup> of window space to floor area, 720 (88.7%) had window space more than 2/5<sup>th</sup> combined to floor area. AQI of rural household revealed 192 (23.6%) were of poor standards.

**Conclusion:** The present study shows exposure to air pollution is extensive in the rural population who use solid fuel as source of energy at household levels.

**Keywords:** Indoor Air pollution, Indoor Air quality , Rural House



## A Mixed Methodology Study: The Comparison Between Competence & Psychological Resilience Between New & Experienced Healthcare Workers

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### ABSTRACT

**Background:** Healthcare environments are inherently stressful, significantly affecting the psychological well-being and resilience of their workforce. Workers often face high-pressure situations that contribute to burnout and decreased job satisfaction. This study investigates the relationship between perceived competence and psychological resilience among healthcare workers, comparing novice and experienced professionals.

**Aim:** To analyse how perceived competence influences psychological resilience in healthcare workers and identify factors that contribute to this relationship.

**Materials and Methods:** A mixed-methods observational study was conducted over two weeks in a tertiary healthcare setting, involving 75 healthcare workers selected through convenience sampling. The quantitative component utilised the Connor-Davidson Resilience Scale (CD-RISC 10) for assessing resilience and the Health Professional Education in Patient Safety Survey (H-PEPSS) for competency evaluation. Qualitative data were gathered through semi-structured interviews guided by the Brief COPE scoring system.

**Results:** Preliminary analysis revealed a positive correlation between perceived competence and psychological resilience, with experienced professionals showing significantly higher resilience levels than novices. Qualitative findings highlighted mentorship, institutional support, and work-life balance as crucial factors enhancing resilience, while newcomers faced challenges requiring targeted support.

**Conclusion:** This study underscores the necessity of fostering a culture of competence and resilience in healthcare settings. Implementing structured mentorship programs and enhancing organisational support are vital for equipping healthcare workers to navigate workplace complexities effectively.

**Keywords:** Psychological resilience, healthcare workers, perceived competence, mentorship.



**Study of Fluoride and Thyroid Profile Status in Pregnancy of Second Trimester Women: A Cross Sectional Study**

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**ABSTRACT**

**Background:** Kolar district is declared as fluoride endemic in Karnataka. Impact of fluoride and thyroid hormones during pregnancy affects cognitive abilities in offspring. The foetus is dependent on maternal thyroid hormones until mid-gestation and continues to be partially dependent until birth. Aim: To find the association of fluoride and thyroid hormones in pregnancy of mid gestation and to find effect of fluoride compounding thyroid disruption.

**Materials and Methods:** This prospective purposive sampling included pregnant women of < 35 years with gestational period from 13 weeks to 27 weeks and age matched non pregnant woman attending OPD of OBG in R.L Jalappa Hospital and research centre.

**Results:** Comparison of biochemical variables among clinically proven healthy controls and Second Trimester subjects, Total Triiodothyronine ( $1.39 \pm 0.23$ ;  $2.00 \pm 1.61$ ), Total Thyroxine ( $8.33 \pm 2.04$ ;  $13.81 \pm 3.58$ ) and serum fluoride ( $0.14 \pm 0.02$ ;  $0.49 \pm 0.31$ ) observed elevated significantly in group 2. Whereas, TSH is significantly decreased in group 2 compared to group 1. Pearson's Correlation for serum fluoride with thyroid hormones and Haemoglobin in study subjects observed significant negative correlation of serum fluoride with haemoglobin percentage. In control group we observed negative correlation and no significance of serum fluoride. Correlation of Haemoglobin with thyroid hormones in study subjects observed, T4 is significantly negatively correlated, T3 and TSH were observed no significance in Pregnancy group.

**Conclusion:** Excess fluoride intake during early pregnancy may lead to increased prevalence and severity of maternal anaemia as well as adverse foetal outcomes in the form of foetal intelligence quotient (IQ) scores, miscarriages, abortions, intrauterine deaths, and congenital malformations.

**Keywords:** Fluoride, Thyroid Profile, Mid Gestation, Intelligence Quotient

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## Prevalence and Anthropometric Predictors of Metabolic Syndrome In Type 2 Diabetes Mellitus

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### **ABSTRACT**

**Background:** It is estimated that 70% to 80% of T2DM patients have metabolic syndrome (MetS). The varying definitions of MetS make it difficult to accurately evaluate the prevalence in T2DM patients. Various anthropometric parameters have shown vital role in predicting MetS for early management.

**Aim:** To identify the prevalence of MetS in T2DM patients using WHO, modified NCEP-ATP 3/JIS and IDF criteria, and identify anthropometric predictors of MetS.

**MATERIAL AND METHODS:** This is a cross-sectional study included 212 T2DM patients who visited Endocrinology OPD, VIMS&RC between September 2022 to February 2023. Detailed history, anthropometry (Neck, wrist, midcalf circumference; triceps skinfold thickness), FPG, triglyceride and HDL of patients fulfilling inclusion criteria was noted and categorised into MetS using various criteria.

**Results:** In present study, prevalence of MetS in T2DM patients using modified NCEP-ATP 3/ JIS, IDF, and WHO criteria were 77.8%, 67% and 40.6%, respectively. The highest agreement was noted between modified NCEP-ATP 3/ JIS and IDF criteria ( $\kappa=0.686$ ;  $p<0.001$ ). Neck circumference (AUC-0.7;  $p<0.001$ ) had highest area under curve and cut-off of 35.5cm had 69.7% sensitivity and 63.8% specificity to predict MetS using modified NCEP-ATP 3/ JIS criteria. Whereas, mid-calf circumference (AUC-0.721;  $p<0.001$ ) had highest area under curve and cut-off of 33.5cm had 62% sensitivity and 71.4% specificity to predict MetS using IDF criteria.

**Conclusion:** Highest prevalence of MetS in T2DM patients was given by modified NCEP-ATP 3/ JIS (77.8%) followed by IDF criteria (67%) with good inter-criteria agreement. Both neck and mid-calf circumference fared better in predicting MetS in T2DM.

**Keywords** – Metabolic Syndrome, Type 2 Diabetes Mellitus, Modified NCEP-ATP 3 criteria, JIS criteria, IDF criteria



**Self-Medication Practice Among Patients and Their Knowledge of Reporting Adverse Drug Reactions in Tertiary Care Hospital**

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**ABSTRACT**

**Background:** Self-medication, including both the use of over-the-counter (OTC) drugs and the use of previously prescribed medications without a physician's guidance, is a public health concern with global prevalence ranging from 11.2% to 93.7%. While OTC drugs are accessible, their misuse increases the risk of adverse drug reactions (ADRs). ADRs are defined as harmful or unpleasant reactions linked to medicinal products. A drug safety profile is established through a case-by-case analysis and summary report analyses concerning the safety of medicinal products and its misuse; hence this study was undertaken.

**Aim & Objective:** To determine the knowledge, awareness, frequency, and severity of ADRs related to self-medication among patients and to describe their main characteristics.

**Materials and Methods:** The study was conducted for a duration of 7 months in 144 subjects aged 18 years and above through questionnaire which included sociodemographic information, self-medication practices and adverse drug reactions.

**Results:** Out of 144 subjects, 51% were males and 49% females with mean age of. 40.59 24% subjects had sedentary life style. Fever, backache, headache, cough, arthritis were common symptoms and drugs used were NSAIDs, cough syrups, antihistamines, and antibiotics. 94% were unaware of ADRs. 9.7% patients had experienced ADRs, hospitalized, had rashes, itching, deranged liver enzymes, steven Johnson syndrome, hypokalemia, gum hypertrophy.

**Conclusion:** Strategies must be designed to raise awareness, educate the patients for effectiveness of pharmacovigilance system and an urgent need for regulatory control over self-medication to safeguard from harm.

**Keywords:** Adverse drug reaction, self-medication, patient reporting



## Knowledge of Snakes and Snakebite Management Practices among Residents of Kolar: A Cross-sectional Study

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### **ABSTRACT**

**Background:** India reports approximately 50,000 deaths annually from snakebites, despite the availability of antivenoms. Inadequate knowledge and myths about snakebites exacerbate this issue, particularly in areas like Kolar, Karnataka, where agriculture and related activities increase exposure to snakes. This study assesses the knowledge and practices related to snakes and snakebite management among residents of Kolar.

**Aim:** To evaluate the knowledge about snakes and the practices for snakebite management among residents of Kolar.

**Materials and Methods:** This cross-sectional study used a questionnaire to assess knowledge and practices. Ethical approval was obtained. Participants included adults aged 18 and older from various groups: farmers, non-medical students, non-medical teachers, ASHA workers, ambulance drivers, first responders, Group D hospital employees, and medical officers. A sample size of 300 was determined using statistical formulas. Data were collected from October to November 2024 in villages, degree colleges, primary health centers, and a medical college in Kolar. Analysis was performed using Epi Info software.

**Results:** The study included 300 participants: 50 farmers, 50 non-medical students, 50 non-medical teachers, 42 ASHA workers, 12 ambulance drivers, 12 first responders, 34 non-teaching hospital employees, and 50 doctors. The majority could identify common snakes but struggled with less common species. Misconceptions about snakebites were prevalent, with many unaware of dry bites and the correct management practices. Common incorrect practices included the use of tourniquets and incision of bite sites, while awareness of appropriate protocols was low.

**Conclusion:** The study reveals significant gaps in knowledge about snake identification and management practices among residents of Kolar. There is a critical need for improved education on snakebite management, including understanding dry bites and appropriate first aid measures. Enhanced training for both the public and healthcare providers is essential to reduce mortality and improve outcomes for snakebite victims.

**Keywords:** Snakebite, Kolar, Knowledge, Management Practices, Public Health, Antivenom



## A Survey on Glaucoma Awareness, Knowledge, and Practices Among Urban and Rural Population

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### **ABSTRACT**

**Aim :** Glaucoma is the leading cause of irreversible blindness worldwide, with a significant number of cases remaining undiagnosed until advanced stages due to a lack of awareness. This study aims to assess and compare the awareness, knowledge, and practices regarding glaucoma among the urban and rural populations of South India, as well as between male and female populations, to inform future awareness and screening programs.

**Methods:** A cross-sectional, questionnaire-based survey was conducted over three months in South India. The study included urban and rural residents above 20 years of age who had heard of glaucoma, while excluding medical professionals and those already diagnosed or undergoing treatment for glaucoma. Participants were asked a series of demographic questions, followed by questions assessing their awareness, knowledge, and practices related to glaucoma. Statistical analysis was performed using SPSS Version 23, with results compared between urban and rural, as well as male and female populations. Chi-square tests were used to find associations between variables, with significance set at  $p < 0.05$ .

**Results:** The study enrolled 100 participants. The results highlighted significant differences in glaucoma awareness and knowledge between the urban and rural populations, as well as between male and female respondents. Factors such as educational status and access to healthcare were key determinants of awareness and screening practices.

**Conclusion:** The study underscores a critical gap in glaucoma awareness, particularly in rural areas, and among women. These findings suggest a need for targeted glaucoma awareness campaigns and enhanced screening efforts, especially in rural communities, to promote early diagnosis and prevent blindness.



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### Knowledge, Attitude, Practice Regarding Family Planning Methods among Post-partum Mothers in Urban & Rural Health Facilities in India

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#### **ABSTRACT**

**Background:** India is the second-most populous country in the world even though it was the first country in the world to launch the National Family Welfare Program. Despite its existence since 7 decades the proportion of women not utilizing contraception, has been central to reproductive health efforts and still remains relevant for most policy makers and Family planning programs. This study explored the Gap in the existing Family Planning Programme. Objective: To assess the Knowledge, Attitude and Practice (KAP) of contraceptive use among post-partum women in urban and rural sector of India.

**Methodology:** A facility based Descriptive Cross Sectional Study was conducted at R L Jalappa Hospital & Research Centre Kolar, Karnataka and Aadhar Hospital - Health Institute , Hisar, Haryana from April to September 2024 by using a Pre tested Questionnaire capturing the data on Sociodemographic details, MCH Practices & Knowledge, Attitude & Practices(KAP)of Contraceptives among 50 Postpartum women in each of the Selected Hospitals mentioned above.

**Results:** The Key determinants for poor KAP for contraceptives in rural areas were Socio-Cultural factors, Husband role in Decision making, Taboos, Opposition to the contraception, Lower social class and lack of Formal Education. Where as in urban areas Social Media, Accessibility and Health Professional advice influenced the contraceptive use.

**Conclusion:** There is still a lag in contraceptive uptake across regions resulting in high unmet need due to various socioeconomic and cultural factors.



**Acute Encephalitis Syndrome with Complete Neurological Recovery - A Case Report**

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**ABSTRACT**

**Background:** Acute Encephalitis Syndrome (AES) presents with acute onset of fever with numerous neurological manifestations caused by various etiologies. AES remains a major cause of morbidity and mortality. This case is being presented because of its complete recovery without any deficits.

**Case report:** A 3year 11months, completely immunized male child, presented to emergency with complaints of fever, convulsions, and vomiting for 1 day. On examination, the child was febrile with tachycardia and Glasgow Coma Scale (GCS) 14/15. Blood sugars were normal. Within 6 hours of admission, there were multiple episodes of seizures with loss of consciousness. Child was started on anti-epileptics and in view of poor GCS (7/15) was intubated and connected to mechanical ventilator. Complete blood count revealed moderate anemia. Other investigations were within normal limits. MRI-brain revealed hyperintensities in bilateral thalami and pons suggestive of infective encephalitis likely Japanese encephalitis (JE). A diagnosis of acute encephalitis was entertained. Symptomatic and supportive family-centered care was provided. As child required prolonged ventilatory support, tracheostomy was done. Child improved gradually, hence was weaned off from ventilator and tracheotomy was closed after child demonstrated hemodynamic stability. Child recovered completely without any neurological deficit and discharged on 41st day of admission.

**Conclusion:** As JE is endemic in Kolar, JE vaccine is provided free of cost. The child had received two doses of JE vaccine. In acute encephalitis, neurological deficits are very common. But, with good evidence-based treatment and supportive care, child recovered without any neurological deficits.

**Keywords:** AES, Japanese Encephalitis, Immunized, Neurological recovery.



## Atypical Metastatic Presentation of Renal Carcinoma in Buccal Mucosa : A Case Report(Pathology)

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### ABSTRACT

**Background:** Renal cell carcinoma(RCC) is an adenocarcinoma arising from the renal tubular epithelium and is a predominant renal malignancy, constituting 2-3% of all adult neoplasms. Its pronounced vascularity predisposes to extensive hematogenous metastasis, often resulting in late-stage presentation and suboptimal prognostic outcomes. Management primarily involves radical nephrectomy and targeted systemic therapy.

**Case description:** A 58-year-old male presented with a two-month history of swelling in the right cheek and upper lip, resulting in trismus. History of total penectomy for penile carcinoma was present. Examination revealed a 6×5 cm ulcerative lesion on the right buccal mucosa. Notably, a firm 8×4 cm mass was palpated in the left renal angle. Urine analysis demonstrated the presence of dysmorphic RBC in the urine. Radiological investigations revealed a hypermetabolic lesion in the left kidney suggestive of renal cell carcinoma and metastatic lesions in the buccal mucosa and C2&L1 vertebrae. Histopathological evaluation confirmed Grade-2 clearcell RCC, with immunohistochemical staining further elucidating the diagnosis. The patient underwent radical nephrectomy and wide excision of the buccal mucosa. Left radical nephrectomy specimen revealed a lobulated neoplasm with microscopic features of Grade-2 clear cell RCC with metastasis to buccal mucosa.

### **Discussion:**

Renal cell carcinoma (RCC) possesses a hypervascular nature that predisposes it to hematogenous dissemination primarily metastasizing to the lungs, liver and adrenal gland. Only 1% exhibit metastasis to head&neck region typically involving the thyroid. This case exemplifies atypical buccal mucosa metastasis initially suspected as oral carcinoma. However, subsequent investigations confirmed metastatic RCC, diverting the treatment towards the same. This rare presentation underscores the imperative for heightened clinical suspicion and a comprehensive diagnostic approach as RCC frequently remains an incidental finding.



## A Rare Presentation of Poland's Syndrome

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### **ABSTRACT**

**Introduction:** Poland's Syndrome is classically characterized by absence of unilateral chest wall muscles and sometimes ipsilateral symbrachydactyly. Most of the Poland Syndrome is sporadic.<sup>1</sup> The cause of Poland syndrome is unknown. However, an interruption of the embryonic blood supply to the arteries at about the 46th day of embryonic development is commonly accepted among several theories of etiogenesis.<sup>2</sup> In present case report, an unusual presentation of x-linked ichthyosis in Poland's syndrome (P141) is reported. Case Report: A full-term male baby, delivered via emergency LSCS (fetal distress). The baby was first issue of a non-consanguineous marriage; no significant antenatal history was present. On examination, dysmorphic ears present. Visible hollow depression present below the sternum and stretched, shiny skin present over abdomen. Absence of nipple and areola noted. Undescended testes present. Desquamation present over extremities predominantly extensor surface. Absence of body hair noted. No systemic abnormality was noted. X-ray chest showed no cardiac or skeletal abnormalities but increased translucency over the right side due to the absence of pectoralis major muscle. Axial computed tomography scan showed the absence of pectoralis major on the right side.

**Conclusion:** This is a rare presentation of Poland's syndrome associated with dermatologic conditions like X-linked ichthyosis and atrichia and bilateral athelia. This case highlights the varied presentation of Poland's syndrome.

**Key Words:** Poland, Syndrome, Presentation.



## Ameloblastoma: An Aggressive Lesion of the Mandible

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### **ABSTRACT**

**Introduction:** Ameloblastoma is an uncommon tumor that develops from cells involved in tooth enamel formation. It mostly affects the back area of the jaw, with the lower jaw being more likely than the upper jaw. While benign, these tumors can behave aggressively by growing into nearby bone and tissue. In rare instances, they can turn cancerous. Ameloblastoma usually causes gradual jaw swelling and pain, and in severe cases, significant facial distortion. If any person detects any jaw swelling or discomfort, it is important to see a doctor or dentist for a diagnosis. Early detection and treatment can help avoid serious problems, causing significant impact on the patient's day to day activity, morbidity and mortality. These typically appear in people between the ages of 40 and 60. Radiographically, X-rays typically reveal ameloblastoma as a dark spot with sharp, distinct boundaries as a dark area (radiolucent) with clearly defined edges (well-circumscribed borders).

**Conclusion:** This is a case report of a 40-year-old female patient who presented with a swelling over lower part of jaw since 3 years slowly growing in size and involving remaining part of lower jaw which was not associated with any pain.

**Result:** The tumour was treated with surgical resection of mandible.

**Keywords:** Ameloblastoma, Odontogenic Tumor, Subtotal Mandibulectomy, Free Fibular Flap Reconstruction



## A Case Presentation on Mucinous Carcinoma of Right Breast with Recurrence Having Overall Survival of Thirty Years Since Diagnosis

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### **ABSTRACT**

**Background:** Mucinous carcinoma of breast has a very good prognosis that is, 90% survival at the end of 10 years. Patient was diagnosed with Fibroadenoma right breast in 1992 for which surgery was done. Patients was diagnosed with Mucinous Ca Rt Breast in 1994 for which lumpectomy was done. She took alternate medicine treatment from 1994-2022. In 2024 she presented with fixed ulceroproliferative mass in the right breast to the hospital. There was presence of matted right axillary lymph nodes and hard left axillary lymph node. There was no involvement of the supraclavicular group of nodes on examination. She also had pleural effusion with lung and brain metastasis which was suggestive of systemic involvement. PET-CT showed large ulceroproliferative growth with multiple cutaneous ulcerations with infiltrations in the underlying pectoralis muscles, right anterior chest wall, costal cartilages extending into pleural space, multiple lung metastasis. MRI showed brain metastasis.

**Aim:** To document a case of mucoid carcinoma breast and understand the importance of adherence to the right treatment.

**Methodology:** The patient was started on: aromatase inhibitors: TAB LETROZOLE 2.5 mg DAILY CKD 4 Inhibitors: TAB PALBOCICLIB 125mg DAILY \*21 DAYS FOLLOWED BY ONE WEEK REST. The patient also underwent palliative Radiotherapy: 35 Gy in 7 fractions to post central gyrus and 25 Gy in 5 fractions to vermis, 30 Gy in 10 fractions to the right breast

**Result:** In a treatment course of two years from 2022-2024, there has been partial response in the form of reduction in the size of breast lesion, right axillary lymph node, lung nodules and pleural thickening. She is advised to continue medication.

**Conclusion:** Importance of regular follow up even in favorable histology and prompt treatment in stage IV disease to improve the quality of life

**Keywords:** Carcinoma, Metastatic, Mucinous, Breast



## Exceptional Instance of Ileal Metastasis from Cervical Cancer

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### **ABSTRACT**

**Introduction:** Cervical cancer is recognised as the second most prevalent malignancy among women globally. Usually, cervical cancer metastasis through local extension, lymph nodes, or pulmonary routes. However, hematogenous spread occurs less frequently to lungs, bone and liver. Metastasis to the small intestine is exceptionally rare, accounting for just 4-10.6% of all cancer cases. As, small intestine accounts large space for enterocelia and abundant immune protection, it typically resists metastasis.

**Case Presentation:** The present study reports the case of 34-year-old women, with a history of radiation-treated and surgically-resected cervical cancer. Few months later, patient experienced vault recurrence for which she underwent exploratory laparotomy with vaultectomy, partial cystectomy, distal left ureterectomy along with ureteric re-implantation. Following surgery, patient developed a rectovaginal fistula.

A year later, patient presented with GI symptoms like pain abdomen, nausea, vomiting, bleeding and weight loss. The exploratory laparotomy revealed an ulcerative lesion in the ileum. The gross examination showed greyish ulcerative lesion measuring 2x1 cm. Histopathological analysis of the excised specimen identified polygonal tumour cells arranged in nests, with keratin pearl formation. These findings are consistent with metastatic squamous cell carcinoma affecting the ileum.

**Conclusion:** Small intestine metastasis from primary cancers are often misdiagnosed or overlooked, as these metastases are frequently mistaken for acute abdomen, due to their non specific symptoms. This case highlights the need to consider ileum metastasis in the differential diagnosis of acute abdomen in patients with cervical cancer.

**Keywords:** cervical cancer, recurrence, ileum metastasis'



**A Cross-Sectional Study of Knowledge, Attitude and Practice of Chatgpt among Medical Students**

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**ABSTRACT**

**Background:** Chat Generative Pre-Trained Transformer (ChatGPT) with billions of stored data, utilizes deep learning algorithms to generate human-like responses, pertaining to users' queries. ChatGPT has been employed across various fields, including health care and education.

**Aim:** To assess knowledge, attitude, and practice of ChatGPT among medical students.

**Materials & Methods**

A questionnaire based cross sectional study. Protocol was approved by ethics committee; informed consent obtained. Study duration 2 months. Questionnaire with 20 questions regarding knowledge, attitude, and practice of ChatGPT, was validated with Cronbach's alpha (0.77) and circulated as Google forms using Likert's scale for medical students till interns.

**Results:** 762 medical students and interns responded, 47% from phase II and 25% phase I. 54% males, 46% females, mean age 20.4±1.7 years.

59% were familiar with ChatGPT, whereas 38% aware of related research papers. 63% agreed they understood its structure, 57% agreed it helps in learning. 51% agreed it can give wrong information, 54% expressed ChatGPT cannot qualify for authorship.

53% felt comfortable using ChatGPT, 39% trusted its accuracy. 21% agreed it can diagnose. 32% felt it can replace human communication, 66% agreed it can reduce workload, 19% agreed it can replace health care professionals and 38% felt it can be used for education.

41% agreed use of ChatGPT in medical field, 75% agreed it was easy to use, 32% expressed it had limitations. 30% agreed having security issues.

**Conclusion:** Medical students (≥50%) had the knowledge of ChatGPT, attitude below 40% and practice, around 40%.

**Keywords:** Chat GPT, medical students, knowledge



## Exploring the Clinical Scenario of Ambiguous Genitalia

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### **ABSTRACT**

**Introduction:** Disorders of Sexual Development (DSD) are a complex group of conditions which require a detailed evaluation and management. Ambiguous genitalia is also known as atypical genitalia and is a type of disorder of sex development (DSD). The incidence of ambiguous genitalia in newborns is about 1 in 4,500. This condition is commonly seen in deficiency of enzymes required for sexual development or due to adrenal hyperplastic conditions. Management of ambiguous genitalia requires a multidisciplinary approach. Early diagnosis and management including psychosocial support in these cases is crucial as it has significant impact on the family and direct the gender of rearing in the short-term, and monitoring for the development of malignancy in the gonads in the long-term . Here we present and discuss the clinical scenario of a case of ambiguous genitalia in a newborn, presented with respiratory distress syndrome in paediatrics department at SIMS&RC.

**Keywords:** adrenal hyperplasia, gender rearing, ambiguous genitalia, DSD



**Usage of Adequately Iodised Salt and Its Determinants at Household Level among the Rural Population in Salem District**

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**ABSTRACT**

**Background:** Most cost effective and sustainable intervention to address iodine deficiency is the Universal Salt Iodization (USI). According to the National Family Health Survey 5 (NFHS 5) data, 94.3% of the households in India were consuming adequately Iodised salt.

**Objectives:** To estimate the prevalence of Iodised salt utilisation at the household level using a Rapid Diagnostic Test (RDT). To determine the factors influencing Iodised salt utilisation at the household level.

**Materials and Methods:** This is a community based cross sectional analytical study, conducted among 640 head of the household residing in the rural areas using simple random sampling method. Data was collected using a pre tested semi-structured questionnaire. Categorical variables were described using frequency and percentage and Continuous variables were described using mean and standard deviation. Statistical significance was tested using Chi Square test and p value < 0.05 was considered significant.

**Results:** In this study, the mean age of the study participants was 38.29±14.26 years. Nearly 94.4% were using packed salt. Around 39.4% and 33.7% look for brand and cost respectively while purchasing the salt. Nearly 80.9% of the households were utilizing adequately Iodised salt (> 15 ppm) as per Rapid Test. Utilisation of adequately Iodised salt was significantly associated with usage of powdered salt, use of packed salt, salt storage in dry area, non-exposure to sunlight and storage of salt for a duration of < 2 months

**Conclusion:** In this study, utilisation of adequately iodised salt was lower than the Universal Salt Iodization target of 90%. Iodised salt levels should be regularly monitored through regular visit to the shops and markets by concerned legal authorities.

**Keywords:** Iodine, Deficiency, Malnutrition, Goiter



**Presenting the Case Acute Hemorrhagic Leukoencephalitis - Rare Post Blood Transfusion Reaction**

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**ABSTRACT**

**Background:** Acute haemorrhagic leukoencephalitis (AHLE) is an inflammatory disease of the brain, most often affecting the cerebrum, less commonly the cerebellum, the brain stem, or the spinal cord. AHLE is commonly considered to be a variant of acute disseminated encephalomyelitis (ADEM) (1, 2). While the latter is mainly seen in children, the former is more common in adults. Due to the rarity of the disease and the complex diagnostic workup, AHLE is likely to be underrecognized, and underreported.

**Objectives:** To present a patient with rare post blood transfusion reaction Acute haemorrhagic leukoencephalitis (AHLE) and a systematic review of the literature analysing diagnostic procedures, treatment, and outcomes of AHLE

**Materials and Methods:** Source of data : Patient attending OPD of JGMM Medical college and Hospital.

**Conclusion:** Diagnosis is challenging as the level of evidence regarding the diagnostic yield of clinical, neuroimaging and laboratory characteristics remains low. Hence, clinicians are urged to heighten their awareness and to prompt cerebral biopsies in the context of rapidly progressive neurologic decline of unknown origin with the concurrence of the compiled characteristics. Future studies need to focus on treatment characteristics and their effects on course and outcome.

**Key Words:** Rare post blood transfusion reaction in Acute haemorrhagic leukoencephalitis.



**Knowledge, Attitudes, and Perception of Caretakers of Patients Undergoing Dialysis**

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**ABSTRACT**

**Background:** Chronic kidney disease (CKD) patients need care. Caregivers lack knowledge about disease care. Understanding caregivers' knowledge, practices highlight their challenges. Their role is crucial for improving CKD patients' quality of life.

**Aim :** To assess the knowledge, attitudes, and practice of caregivers of chronic kidney disease patients undergoing hemodialysis or peritoneal dialysis.

**Materials and Methods:** A prospective questionnaire-based study conducted for 2 months after ethics committee approval. The questionnaire validated by faculty, reliability by 10 participants, Cronbach's alpha (0.73). Caregivers accompanying patients undergoing dialysis were interviewed after obtaining written informed consent.

**Results:** Interviewed 152 caregivers (51% males, 49% females), 51% aged 18-40, 54% employed, 57% rural. 86% knew number of kidneys, but 59% functions. 65% knew predisposing factors, 71% aware of treatments, 53% understood complications, 49% knew medications. 61% understood restrictions, 65% knew about sodium in food, 58% about maintaining potassium.

85% never expected CKD in their relative, 82% willing to learn kidney problems. 93% worried about future, 47% about others' opinions. 77% concerned about providing enough care, 83% about costs, 93% about patient's survival. 82% were comfortable with the patient, 51% not frustrated, 85% provided emotional support. 66% followed diet, 63% recognized edema, 61% could not identify complications, 73% did not know disease prevention. 71% struggled handling devices. 94% understood importance of pre-dialysis follow-up and investigation.

**Conclusion:** Caregivers more than 60% had knowledge of CKD and also could monitor them at home. Majority were worried about the expenditure.

**Keywords:** chronic kidney disease, dialysis, caretakers, perception



**Cross Sectional Study on Knowledge, Attitudes and Willingness to Organ Donation among the General Public in Salem District, Tamilnadu**

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**ABSTRACT**

**Background:** Globally, the number of patients on a waiting list to receive an organ transplantation exceeds the number of organs donors. The WHO Global Observatory on Donation and Transplantation recently estimated that over 130,000 solid organ transplantations were performed across the globe in 2017, which represents less than 10% of the global need

**Objectives:** To assess the level of knowledge, attitudes, and willingness to organ donation among the general public.

**Materials and Methods:** The study population consisted of 250 participants from urban area of Salem district. Data was collected by a self-designed structured questionnaire consisting of 20 items. Knowledge is measured by 10 items and presented as a 10 point score, attitudes was assessed using a 5-point Likert scale and willingness to donate is assessed as binary variable (0 = No; 1 = Yes). Data was analysed using SPSS Version 22. A logistic regression model was used to assess the factors associated with adequate knowledge.

**Results:** In this study, the mean age of the study participants was 38.29±14.26 years. Nearly 65% were males and 35% were females. About 7% and 6.5% were respectively smoker and alcoholic. Nearly 16.1% were known hypertensive and 6.6% were known diabetic. Only 72.2% had adequate knowledge regarding organ donation and 11% believed that they cannot have a traditional funeral. Majority 77.4% were willing to donate organs.

**Conclusion:** Proper Knowledge about the facts related to organ donation through awareness programs may raise the rate of willingness to organ donation.

**Keywords:** Organ, Eye, Heart, Liver

## Sookshma Meditation Workshop -2024

The Department of Integrative Medicine in collaboration with Dept. of Allied Health Sciences, SDUAHER, Sri Devaraj Urs Medical College & Sri Devaraj Urs College of Nursing, SDUAHER, R L Jalappa Central School, SDUET conducted a workshop on Sookshma Meditation from 17<sup>th</sup> April to 19<sup>th</sup> April 2024, from 11:00 am to 1:00 pm in Sir C V Raman Auditorium, PG block, SDUAHER.

**The Workshop was inaugurated** by Dr. B. Vengamma, Vice-Chancellor, SDUAHER, Dr. DVLN Prasad, Registrar, SDUAHER, Dr. Prabhakar K, Dean of the Faculty of Medicine, Dr. C D Dayananda, Dean of the Faculty of Allied Health and Basic Sciences, Sri Hanumanth Rao, Purchase Officer, SDUAHER, Dr. Ashween Bilagi, Head of the Department of Integrative Medicine, SDUAHER, Sunitha Amma, Founder of Peace Tree Innovations, Vancouver,



Canada, and Dr. Suman Kollipara, President of Peace Tree Innovations, Vancouver, Canada, along with other distinguished dignitaries, through the lighting of the lamp. During the inauguration function, Dr. DVLN Prasad, Registrar, presented the welcome address. Following



this, Dr. B. Vengamma, Vice-Chancellor, SDUAHER, addressed the gathering and spoke about the importance of Integrative Medicine. Dr. Prabhakar K, Dean of the Faculty of Medicine, suggested that students practice regular yoga and meditation, discussing evidence from his practices during his introductory session. Later, Dr. C D Dayananda, Dean of the Faculty of Allied Health and Basic Sciences, spoke about the importance of Shookshma meditation in his introductory session. Next, Sunitha Amma, Founder of Peace Tree Innovations, Vancouver, Canada, and Dr. Suman Kollipara, President of Peace Tree Innovations, Vancouver, Canada, conducted lectures along with Shookshma meditation practices. With excellent audience interaction, feedback was collected at the end of the session. Finally, Dr. Ashween Bilagi, Head of the Department of Integrative Medicine, SDUAHER, presented the vote of thanks.

**The second day** of the session began with a welcome speech by our Registrar, Dr. DVLN Prasad, SDUAHER. Mrs. Lakshmi Bhat, Principal of RL Jalappa Central School, SDUET introduced the speakers to the audiences. This was followed by a workshop conducted by Sunitha Amma, Founder of Peace Tree Innovations, Vancouver, Canada, and Dr. Suman Kollipara, President of Peace Tree Innovations, Vancouver, Canada. They led Shookshma meditation session included practical demonstrations and interactive elements,





allowing participants to experience the benefits firsthand. The audience, comprising medical students, nursing students, allied health students, and faculty members from SDUAHER, RLJCS, and RLJCON, engaged deeply with the practices. Many participants reported feeling very relaxed, happy, and more centered after the session. At the end of the workshop, Dr. Ashween Bilagi, Head of the Department of Integrative Medicine, SDUAHER, proposed the vote of thanks. Dr. Bilagi expressed sincere gratitude to Sunitha Amma and Dr. Kollipara for their enlightening presentations and for sharing their expertise. He also thanked the participants for their enthusiastic involvement and the organizing team for their efforts in making the session a success. The day concluded with a sense of fulfilment and anticipation for the subsequent sessions.

**The third day** of the workshop commenced with a welcome speech by Dr. Krishnappa J, Medical Superintendent of RLJH&RC. Following this, Dr. Prabhakar K, Dean and Principal of SDUMC, has introduced the speakers to the audience. The day's activities included the continuation of Shookshma workshop led by Sunitha Amma, Founder of Peace Tree Innovations, Vancouver, Canada, and Dr. Suman Kollipara, President of Peace Tree Innovations, Vancouver, Canada.

During the workshop, Amma and Dr. Kollipara guided participants through Shookshma meditation practices, emphasizing the techniques' physiological and neurological benefits. The audience comprised medical students, nursing students, allied health students, and other faculty members from SDUAHER, RLJCS, and CON. The session was interactive, with participants engaging deeply in the meditation practices and discussing their experiences.

The session concluded with a relaxed and reflective atmosphere, as participants shared their positive feedback and personal insights gained from the meditation practice. To wrap up the day's events, Mrs. Punitha, Professor of OBG Nursing, SDUCON, proposed the vote of thanks, expressing gratitude to the speakers and participants for their active involvement and contributions to the success of the workshop



ended on a high note, with participants expressing their enthusiasm to apply the learned techniques in their daily lives and academic pursuits.

**The valedictory session** was graced by several distinguished dignitaries. The session was led by the Vice Chancellor of SDUAHER, Dr. B. Vengamma, the Registrar, Dr. DVLN Prasad, and a Trustee of SDUET, Mrs. Mrunalini. They were joined by Dr. Muninarayana C, Controller of Examinations, and the Director of Academics and



Dean of the Faculty of Allied Health Sciences at SDUAHER.

At the valedictory session, the culmination of the workshop was celebrated in the presence of esteemed faculty members. The session's highlight was the felicitation of the two key speakers, Dr. Suman Kollipara, President of Peace Tree Innovations, Vancouver, Canada, and Sunitha Amma, Founder of Peace Tree Innovations, Vancouver, Canada. They were honoured for their invaluable contributions to the workshop and their dedication to promoting Sookshma meditation for global health. The dignitaries expressed their gratitude and appreciation for the insightful sessions and the meditation practices' positive impact on the participants. They commended Dr. Kollipara and Sunitha Amma for their efforts in integrating holistic wellness practices into the academic environment.

The session concluded with heartfelt thanks from the Vice Chancellor, who emphasized the importance of continued collaboration and the implementation of



## JOURNAL OF CLINICAL AND BIOMEDICAL SCIENCES

integrative medicine practices in the university's curriculum. Dr. Ashween Bilagi, Head of the Department of Integrative Medicine, SDUAHER, delivered the vote of thanks, acknowledging the efforts of everyone involved in organizing the workshop and the active participation of the attendees.

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