



RAWALPINDI MEDICAL UNIVERSITY

ABSTRACT BOOK 2021

**NATIONAL
UNDERGRADUATE RESEARCH
CONFERENCE RECON' 2021**

**A PROJECT OF RAWALIAN STUDENTS' RESEARCH
SOCIETY 2021**

RAWALIAN STUDENTS' RESEARCH SOCIETY TEAM 2021

PATRON IN CHEIF	PROF.DR. MUHAMMAD UMAR
PATRON IN CHARGE	PROF.DR. SYED ARSHAD SABIR
PRESIDENTS	HAFIZ MUHAMMAD SANAULLAH FATIMA KHALIQ
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CO-ORDINATORS FOR RESEARCH DIRECTORY	HASHIM KHAN MAHEEN NAZIR HAMZA KHAN
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RAWALIAN STUDENTS 'RESEARCH SOCIETY

STUDENT BODY 2021

CLASS COORDINATORS

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Alishba Ashraf (4th Year)
Faizan Shehzad (2nd Year)
Haroon Shabbir (1st Year)

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Tayyaba Idrees (3rd Year)

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Zianab Ishtiaq (4th Year)
Sarah Rehman (4th Year)
Fatima Faraz (3rd Year)
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Uswa Iftikhar (2nd Year)
Abdul Wasay (2nd Year)
Faraz Hassan Ali (1st Year)
Nida Nisar (1st Year)
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Fahad Gul (4th year)
Uzma Aftab (4th year)

Umar Afzal (4th year)
 Irum Malik (3rd Year)
 Tooba Kanwal (3rd Year)
 Laiba Naseer (2nd Year)
 Abdullah Bin Kamran (2nd Year)
 Khalil Abbas (1st year)
 Hooria Fatima (1st Year)
 Amna Tariq (1st Year)

HUMAN RESOURCES

Saad Rehmat (Final Year)
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 Hamza Shahram (3rd Year)
 Faizan Rasheed (2nd Year)
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 Ramzan Hassan Farooq (1st Year)
 Haris Mumtaz (1st Year)
 Zainab Zahoor (1st year)
 Asad Ulla (1st Year)

MEDIA

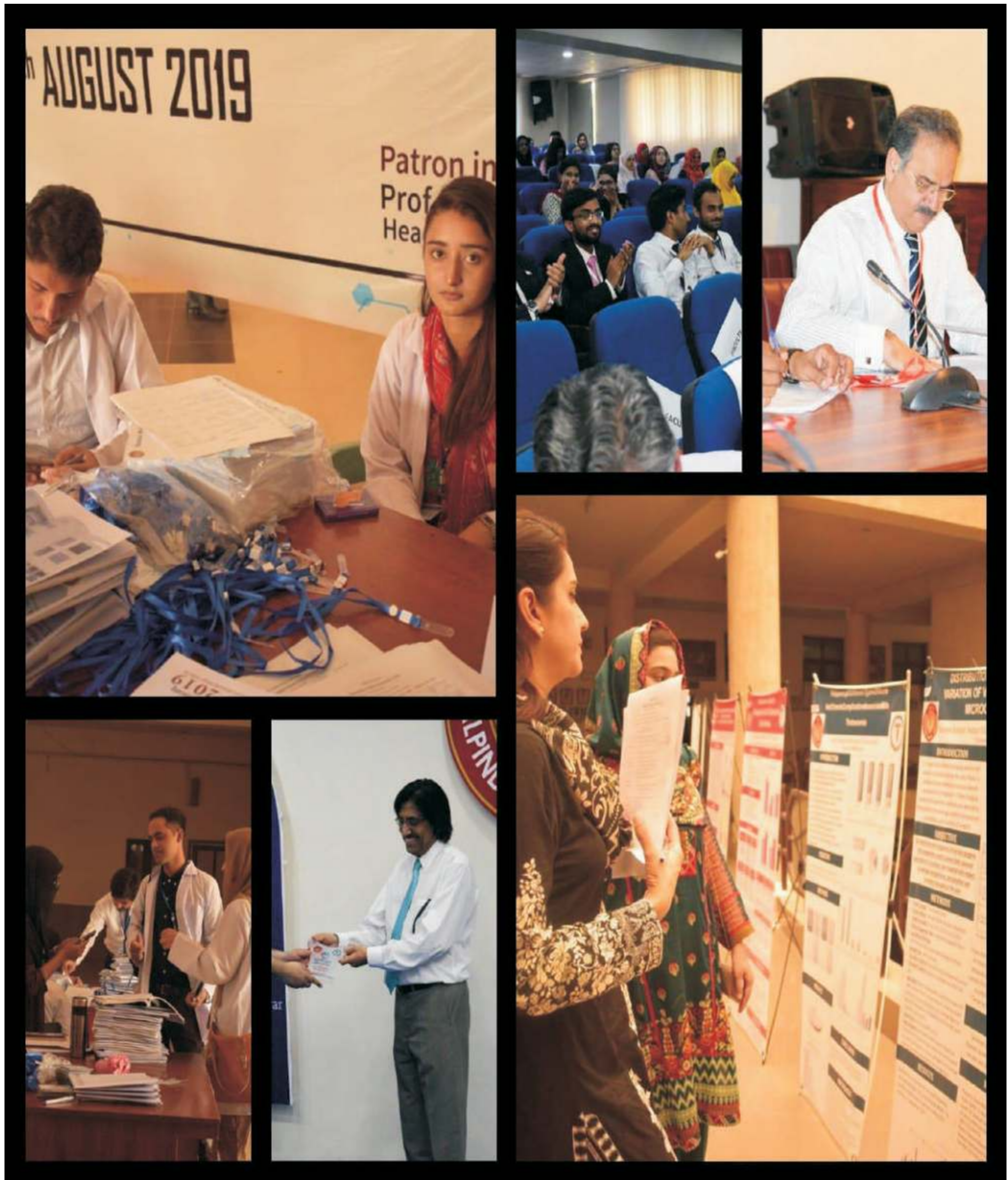
Ayesha Aslam (Final Year)
 Arrow Afzal (Final Year)
 Farhan Saam (4th Year)
 Hamza Malik (4th Year)
 Mansoor Ahmed (3rd Year)
 Alishba Atta (3rd Year)
 Hamza Iftikhar (2nd Year)
 Laweeza Fatima (2nd Year)
 Urooba (1st Year)
 Arrow Kiran (1st Year)

OTB INCHARGE

Noor e Jannat (2nd Year)

PHOTO GALLERY







FOREWORD



PROF.DR. MUHAMMAD UMAR
VICE CHANCELLOR RMU
PATRON IN CHIEF RSRS

“The world is now a global village and it is the time to make research a top priority by the institutions of the country. I believe no institute can progress without research. Research is not only important at the graduate level but at the undergraduate level as well. It gives me pleasure to see the students of Rawalpindi Medical University taking special interest in research and we as office bearers should always provide our full support to the young minds.”



PROF. DR. SYED ARSHAD SABIR
Dean Community Medicine and
Public Health RMU
PATRON IN CHARGE RSRS

“Health research is only cognitive solution to ever growing health issues. Medical students are future health scientists and are supposed to carry forward the health research legacy. RSRS has high potential to supplement health research capacity & culture among medical students through many collaterals like conducting student’s need based short courses & workshops, holding & facilitating students’ participation in research competitions, setting student’s role in domestic research projects, developing national & international health research linkages, like many others.”

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RAWALIAN STUDENTS' RESEARCH SOCIETY

The first ever Rawalian Students 'Research Society (RSRS) was established in March 2014, comprising of a team of motivated and proficient undergraduates of RMC, selected from all the five academic years. About 7-8 members of RSRS have been selected annually by a team of senior faculty members as the 'core team' which includes Presidents, Vice presidents, General Secretaries and Publication in Charges, etc., the duties of whom were to coordinate all the activities of undergraduate research proficiently under the direct supervision and guidance of the Principal of RMC, IRF and research unit. Furthermore, the core team of RSRS has been selecting students from each academic year, two research class coordinators who form a bridge between every student and the RSRS and research coordinator of RMC. The members of RSRS have facilitated their colleagues in all the activities related to research and play a vital role in organizing the student's research conferences. The RSRS members were trained in research via workshops at research unit and they conveyed this knowledge and skill in research to their colleagues. The Presidents and Vice presidents of RSRS held introductory sessions regarding research, literature review and development of synopsis termed as "Master classes" for each academic year annually. RSRS has organized 7 sessions so far that were attended by more than 1000 students in total.

In 2018, due to the overwhelming response of students of Rawalpindi Medical University towards research work, the members of core committee were increased from 8 to 12 i.e., two posts for Chief Coordinators and two for Research Facilitators were added. Executive members from all classes were also selected and were assigned the job of facilitating research groups of their respective classes and making them more familiar with the research methodology.

RSRS also organizes an Undergraduate Medical Research Conference "RECON" every year in which students of RMU present their research projects as posters as well as verbally in moderated sessions. Winners of the competition are presented with Gold Medals and Shields. In "Young Researcher's Forum" organized last year in 2017, more than 65 posters and 10 verbal presentations were put forward by the students of RMU. Rawalian Students 'Research Society has organized 3 Medical Research Competitions (RECON 2016, '17 & '18) in last three years including 40, 65 and 74 research presentations from RMU respectively.

In the current year of 2021, a total of 64 abstracts were received from RMU for presentation at RECON 21. RECON was organized as National Medical Researchers Forum in which medical students of 13 institutions from across the country presented their research papers. A total of 93 abstracts were accepted for verbal and poster presentations. Rawalian Students 'Research Society also organized 4 workshops for undergraduate students regarding research.

Student supplement of Journal of Rawalpindi Medical College started in 2015 and is published biannually. It aims to support students in developing their research skills and expanding clinical knowledge by publishing papers based on current practices and new developments in all branches of medicine; describing the public health problems and papers on medical education.

RESEARCH CONFERENCE (RECON)

RSRS also organizes an undergraduate research conference “RECON” in which students of RMU present their research projects as posters as well as verbally in moderated sessions. Winners of the competition are presented with gold medals and shields. In “Young Researchers Forum” organized in 2017, more than 65 posters and 10 verbal presentations were put forward by students of RMU. RSRS has organized 4 Medical Research Competitions: RECON 2016, RECON 2017, RECON 2018 and RECON 21 with 40, 65, 75 and 63 research presentations from RMU respectively. The RECON 2021 was organized as National Medical Researchers Forum in which medical students from 13 institutions from across the country presented their research papers as poster and oral presentation. A total of 93 abstracts were accepted for verbal and oral presentations in RECON 2021.

RSRS GENERAL BODY 2021-2022



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Fatima Khaliq

President (Female)



**Musharaf Khalid
Bhutta**

**Senior Vice President
(Male)**



Haddaya Umar

**Senior Vice President
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Azeem**

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Ramesha Tahir
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Maham Hassan
Chief Coordinator
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Aleeha Waheed
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Coordinator Human
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Hashim Khan
Coordinator Research
Directory



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Activity



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MEDICINE AND ALLIED

FREQUENCY OF MEDICATION COMPLIANCE AMONG HYPERTENSIVE PATIENTS IN MUZAFFARABAD, AZAD KASHMIR

Noshaba Rashid

Final year student AJKMC, Muzaffarabad

INTRODUCTION: Compliance to antihypertensive medications is a key component to control blood pressure levels. Poor compliance to these medications leads to the development of hypertensive complications and increase risk of cardiovascular events which in turn reduces the clinical outcome.

OBJECTIVES:

1. To determine the frequency of medication compliance among hypertensive patients in Muzaffarabad, Azad Kashmir
2. To find factors responsible for low compliance among hypertensive patients in Muzaffarabad, Azad Kashmir

METHODS: A hospital based cross sectional study among hypertensive patients was conducted at the medicine OPD and cardiology department of AIMS, Muzaffarabad from August to November 2020. The study patients were interviewed. A structured questionnaire was developed to collect information about socio demographic characteristic and a standardized self-reported questionnaire MORISKY GREEN LEVINE MEDICATION ADHERENCE SCALE that is a four item questionnaire was used for data collection. Data was analyzed using SPSS 25.

RESULTS: A total of 100 patients participated in study. Out of total participants, only 38 % of the patients were compliant to medications and 62% of the patients showed poor medication compliance.

CONCLUSION: Our study suggests that medication compliance in hypertensive patients is poor in patients with hypertension. Awareness about the significance of compliance in controlling hypertension should be created for better health outcome.

KEYWORDS: Hypertension , Adherence

TEMPORAL TRENDS IN THE PREVALENCE OF HEPATITIS B, HEPATITIS C AND HUMAN IMMUNO-DEFICIENCY VIRUS IN BLOOD DONORS OF PAKISTAN

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¹4th Year Medical Students, Rawalpindi Medical University

BACKGROUND: A Transfusion transmitted infection (TTI) is a virus, parasite, or other potential pathogens that can be transmitted in donated blood through a transfusion to a recipient. Hepatitis B, hepatitis C, Human Immuno-deficiency virus are common examples of TTIs. The aim of this study was to determine the temporal trends in the prevalence of HBV, HCV and HIV in blood donors of Pakistan over the last 14 years

METHODS AND MATERIALS: A retrospective study was carried out on the blood donors who donated their blood at the Pakistan Institute of Medical Sciences (PIMS) Islamabad. Blood samples were screened for HBV, HCV and HIV over a period of 14 years from 2005 to 2018. Blood donors were selected according to the WHO criteria for blood donation.

RESULTS: A total of 312320 individuals donated blood between 2005 and 2018 out of which 311476 (99.7%) were males and only 991(0.3%) were females The number of annual blood donations increased from 7829 In 2005 to 30731 in 2018. The total number of donors found positive for HBV, HCV and HIV was 5752, 8951 and 124 respectively. Along the study period a slight increase in HBV prevalence of 1.225% in 2005, to 1.451% in 2018 was observed. Meanwhile, the prevalence of HCV decreased from 2.25% to 1.474%. While an alarming increase was observed in the prevalence of HIV. Its prevalence was 0% in 2005, 0.006% in 2006 and reached 0.065% 2018.

CONCLUSION: The study has shown that HCV is the most prevalent transfusion-transmitted infection found in Pakistan blood donors. HIV has the lowest prevalence but has shown the highest increase over the course of the last 14 years. A net decrease was observed in the prevalence of HBV while HCV showed an increased prevalence.

THE ASSOCIATION OF POSTERIOR REVERSIBLE ENCEPHALOPATHY SYNDROME WITH COVID-19: A SYSTEMATIC REVIEW WITH CLINICAL AND PATHOPHYSIOLOGICAL FOCUS

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Mayo Hospital, Lahore^a King Edward Medical University, Lahore^b Allama Iqbal Medical College, Lahore^c

OBJECTIVES: The surge in COVID-19 cases is bringing with it an array of unique neurological manifestations. Clinicians report a possible association with Posterior Reversible Encephalopathy Syndrome (PRES). PRES is an otherwise rare disease that usually arises as part of greater complications such as hypertension and renal failure. The increasing frequency of PRES during the COVID-19 pandemic, and a possible causal relationship between the two necessitates the review of available literature so that knowledge of practicing physicians is up to date in terms of the likely presentation and management of this clinical association.

METHODS: We conducted a systematic literature search on four databases namely Pubmed/MEDLINE, Cochrane, Google Scholar, and ScienceDirect. A total of 34 articles describing 56 cases of PRES in COVID-19 were selected as a part of this review.

RESULTS: The mean age of the patients was 56.6 \pm 15.3 years. The most common clinical presentation of PRES was altered mental status (53.6%) followed by seizures (46.4%) and visual disturbances (23.2%) while hypertension (28.6%) and diabetes mellitus (23.2%) were the most commonly reported predisposing comorbidities. 91.1% of the cases reported MRI/CT findings suggestive of PRES in the brain. 16.1% of the patients were treated for COVID-19 with Tocilizumab, another predisposing factor for PRES. Symptomatic management was employed in most of the cases and 44 patients (78.5%) were reported to fully or partially recover.

CONCLUSIONS: When COVID-19 is developed on a background of hypertension and diabetes, there is a possibility that all these factors play an additive role in the development of PRES. Timely diagnosis and treatment report a good prognosis. Therefore, PRES must be considered a probable diagnosis when encountering COVID-19 patients with suggestive clinical and radiographic findings.

KEYWORDS: COVID-19, SARS-CoV-2, Posterior Leukoencephalopathy Syndrome, Posterior Reversible Encephalopathy Syndrome, PRES.

ASSOCIATION BETWEEN BMI, WAIST CIRCUMFERENCE AND PREHYPERTENSION AMONG ADULTS.

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OBJECTIVE: To know the association between different anthropometric parameters for overweight and obese individuals to prevalence of prehypertension.

STUDY DESIGN: Correlational Study.

SETTING: Vicinity of Kharian and at Outpatient Department, CMH Kharian Cantt. Period: February 2019 and January 2020.

MATERIAL & METHODS: Correlational study carried out in the vicinity of Kharian by employing different anthropometric measurements in accordance with guidelines to look at how blood pressure figure behaves in

overweight, obese and morbidly obese population and further is there a difference in overall outcome if we use waist circumference rather than BMI and its significance in targeting preventive strategies.

RESULTS: Our results show a staircase pattern of increase in blood pressure, initially lying in different phases of prehypertension among normal weight (BMI 23 ± 1.65 ; waist circumference (WC): 86.45 ± 8.78 ; Systolic BP: 127 ± 11.99 ; Diastolic BP: 80.44 ± 9.45), overweight (BMI 27.35 ± 1.23 ; WC: 100 ± 5.32 ; Systolic BP: 128.72 ± 11.29 ; Diastolic BP: 80.05 ± 6.66) and obese individuals (BMI 31.97 ± 1.45 ; WC: 112.12 ± 9.22 ; Systolic BP: 138.06 ± 21.61 ; Diastolic BP: 87.56 ± 9.78), while this trend shifted to full blown hypertension among morbidly obese individuals (BMI 39.88 ± 4.30 ; WC: 120.38 ± 12.84 ; Systolic BP: 145 ± 17.64 ; Diastolic BP: 89.23 ± 10.95)

CONCLUSION: We conclude that prehypertension is already prevalent among normal weight and overweight individuals, and intensive follow up and lifestyle intervention strategy should be employed earlier at this level and waist circumference is a better predictor of cardiovascular disease than BMI and should be routinely done in local primary health care set up to prevent the onset of complications associated with this silent killer.

KEY WORDS: BMI, Waist Circumference, Prehypertension.

RETROSPECTIVE EVALUATION OF POISONING CASES PRESENTING IN ER OF A TERTIARY CARE HOSPITAL OF RAWALPINDI

Aqiba Malik*, Maimoona Maheen, Mehak Ruqia

*4th year MBBS Student RMU

INTRODUCTION: Death due to poisoning has been known since time immemorial. Poisoning cases can be accidental or suicidal. Poisoning cases can vary from region to region in terms of demographic characteristics, poisoning agent and frequency.

OBJECTIVE: The objective of this study is to determine the frequency of poisoning cases, poisoning agents and associated demographic characteristics.

MATERIALS AND METHODS: This descriptive, cross-sectional, retrospective study included 304 patients that presented to Red Zone, Medical ER of Holy Family Hospital over a period of three months from July 2019 till September 2019. All these patients were confirmed cases of poisoning. The data was collected from records of Medicine ER of Holy Family Hospital. SPSS23 was used to analyze data and descriptive statistics were calculated.

RESULTS: Within a period of three months 304 poisoning cases presented. Out of these, 132 (43.4%) were males and 172 (56%) were females. Cases mostly reported were of the ages 18 and 30 with a mean age of 18. Out of these 107 (35.2) cases were of unknown poisoning agent. 60 (19.7%) patients were of Organophosphate poisoning, 57 (18.8%) were of wheat pill poisoning, There were 29 (9.5%) patients of Rat pill, 5 (1.6%) were of acid intake, 11 (3.6) Benzodiazepine cases. 2 (0.7%) presented with Heroin overdose and 9 (3%) of analgesics overdose. 24 (7.9%) presented with other poisons that included intake of agents such as anti-lice powder, alcohol, poisoning food, Brake oil, Petrol, Beta blockers, Glucophage.

CONCLUSION: Majority of the patients were females, regarding age most patients were teenagers and those in thirties. Unknown poisoning was most common followed by Organophosphate and Wheat pill poisoning. This research is important as it highlighted the great number of poisoning cases presented in ER of tertiary care hospital of Rawalpindi in just a period of three months which is an alarming condition.

KEY WORDS: Poisoning, Frequency.

CLINICAL PROFILE OF PATIENTS WITH SYSTEMIC LUPUS ERYTHEMATOSUS – WHAT MAKES PAKISTANI LUPUS PATIENTS DIFFERENT

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INTRODUCTION: Systemic Lupus Erythematosus (SLE) is a chronic, relapsing and remitting, multisystem autoimmune disease having substantial effects on the psychological and physical health of patients.

OBJECTIVE: The present study was conducted to better understand and characterize the clinical presentation, results of serological and immunological tests and sociodemographic factors in Pakistani Lupus population.

MATERIALS AND METHODS: This prospective, cross-sectional study was undertaken at Clinic for Arthritis and Rheumatic Diseases (CARD), DHQ Teaching Hospital Rawalpindi, between January 2019 and December 2019, involving adult patients with SLE (classified based on 1997 revised ACR criteria). Demographic data, clinical and laboratory features, auto-antibody profile, disease duration, treatment history and organ damage (calculated by SLICC/ACR-DI) were recorded for all patients. Descriptive statistics and logistic regression analysis were performed for statistical assessment.

RESULTS: A total of 98 patients (94.9% females and 5.1% males) were included in the study with mean patient age of 30.93 ± 11.09 years and mean disease duration of 3.27 ± 3.01 years. Most observed clinical manifestations were neuropsychiatric systemic lupus erythematosus in 84% patients and muco-cutaneous involvement (photosensitivity, oral ulcers, malar rash, alopecia and discoid rash in 63.92%, 56.70%, 48.45%, 37.11% and 13.40% patients respectively). They were followed by serositis, arthralgias and renal involvement in 60.42%, 33.67% and 25% patients respectively. Anti-nuclear antibody by indirect immunofluorescence was positive in all while anti-dsDNA was positive in 50% patients.

CONCLUSIONS: Fatigue was the most recorded symptom while Neuropsychiatric SLE was the most observed systemic manifestation in Pakistani population followed by muco-cutaneous involvement, serositis, arthralgias and renal involvement. Reasons of serious manifestations at initial presentation include deficiency of healthcare professionals trained in the field of Rheumatology and lack of awareness among patients.

KEYWORDS: Clinical profile, Systemic Lupus Erythematosus, Neuropsychiatric Systemic Lupus Erythematosus, Clinical and laboratory features, Organ damage, Pakistan

RHEUMATOLOGICAL SYMPTOMS IN HEPATITIS C PATIENTS

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INTRODUCTION: The World Health Organization (WHO) has compared Hepatitis C to a “viral time bomb” and estimated that about 180 million people (some 3% of the world’s population) are infected with Hepatitis C virus (HCV). Pakistan is enduring an HCV epidemic of historical proportions-one in every 20 Pakistanis has been already infected with this infection playing a major role in liver disease burden in this country. With confusing rheumatological signs and symptoms of arthritis and Hepatitis C, timely diagnosis and treatment become a challenge for clinicians.

OBJECTIVE: The aims of research are to ease out the diagnosis of hepatitis C and to differentiate it from arthritis. To investigate the relation of rheumatological manifestations with the chronicity of hepatitis C.

METHODS: The cross study was carried out at Allied Hospitals RMU with duration of 2 years due to pandemic. 114 patients of either gender with chronic hepatitis C virus infection attending liver clinics of RMU Allied Hospitals were recruited. Patients were evaluated for different rheumatological features through history. General and rheumatological examination followed by relevant examination. Patients with Hepatitis C [PCR positive/HCV positive] were included and patients with HBV and Paraneoplastic syndrome, previously known musculoskeletal disease, CKD, DM, were excluded.

RESULTS: Out of 114 patients, 52 were male and 62 female. Duration of diagnosis of 37 patients less than 6 months and of 77 patients more than 6 months. Chi Sq performed showed significant relation between duration since diagnosis (chronicity) and positive ultrasound finding, including fatty liver and cirrhosis. (0.07), arthralgias (0.022), sicca symptoms (0.025), numbness (0.025) and paresthesia (0.003). Kruskal-Wallis test performed showed significant relation between inflammatory arthritis and ALT levels. SICCA symptoms manifestation also showed significant relation with high SSS fibromyalgia score (0.08) and high bilirubin levels (0.016). Man Witney test performed showed significant relation between Early Morning Stiffness duration and high SSS fibromyalgia score (0.07).

CONCLUSIONS: With chronicity of Hepatitis C, patients manifested more Rheumatological signs and symptoms confusing the diagnosis with rheumatoid arthritis.

KEYWORDS: Rheumatology, Hepatitis C, Chronic Hepatitis C.

OCCURRENCE OF PAROSMIA AND PARAGUESIA IN POST-COVID PATIENT IN ABBOTTABAD

Muhammad Hasan Khan, Aakif Javed

INTRODUCTION: Covid-19 has emerged as one of the diseases that have impacted all aspects of human population all over the world. It emerged in Wuhan, China in December 2019, and in a short span spread all over the world. As the virus infected more and more people all over the world, various symptoms were observed and documented. They included the short term symptoms and the long term effects which impact the life of the patient even after apparent recovery. Two important neurological manifestations which are seen in initial infection as well as in the post infective period are anosmia and Parageusia.

OBJECTIVES: The aim of this study was to determine the prevalence of Anosmia and Parageusia in post Covid-19 patients among the population of Abbottabad.

METHODOLOGY: It was a descriptive type cross sectional study conducted on 169 people. Study population included the population of Abbottabad including people of all ages and walks of life. A semi structured questionnaire was developed for data collection after review of literature. Data was analyzed by using statistical package of social sciences SPSS version 20s.

RESULTS: A total of 169 patients (n=169) were included in the study, the ages ranged from 14 to 75 with a mean age of 26.4 (SD+ 10.142). It was more common in females with male to female ratio 1:1.42. A majority lived with others compared to on their own in a ratio of 1:3.4 Many had several senior citizens living with them which varied from none to 14 (with the highest frequency in 2). This survey was conducted for people belonging or residing in Abbottabad with only 50 patients (29.6%) commuting to Abbottabad. Frequency of smokers experiencing this loss was also tested with only 13% experiencing these symptoms. 30 patients (17.8%) also reported a loss of weight as opposed to only 7 patients (4%) undergoing an increase in weight. 130 patients (76.9%) had no change in their weight. Of 169, only 112 patients (66.3%) experienced anosmia/Parosmia while 57(33.7%) had no change. 87 patients below the age of 25 (65.4%) reported a loss as compared to the 46 patients (34.6%) in the same age range experiencing no symptoms. From the age range 26-40, 15 patients (75%) reported a loss as compared to the 5 patients (25%) experiencing no symptoms. In comparison from the 41-55 age group, 7 patients (70%) reported a loss compared to 3 patients (30%) experiencing no change. Above 56, there was a 50% probability either way. Chi-square did not reveal a statistical significance as 'p' value was more than 0.05 (p=0.683). Of 169, only 112 patients (66.3%) experienced dysgeusia / parageusia while 57(33.7%) had no change. 85 patients below the age of 25 (63.9%) reported a loss as compared to the 48 patients (36.1%) in the same age range experiencing no symptoms. From the age range 26-40, 16 patients (80%) reported a loss as compared to the 4 patients (20%) experiencing no symptoms. In comparison from the 41-55 age group, 6 patients (60%) reported a loss compared to 4 patients (40%) experiencing no change. Above 56, there was a 50% probability either way. Chi-square did not reveal a statistical significance as 'p' value was more than 0.05 (p=0.431)

CONCLUSION: Anosmia/Parosmia and Dysgeusia/parageusia are some of the more common side effects observed in post covid-19 patients. These two symptoms were observed in more than half of the patients (66.3). There is a high chance that people experiencing these symptoms out of the blue may be the earliest indicator of infection with this virus, therefore they are advised to get tested and treated according to medical professionals.

CLINICAL EFFICACY OF AZITHROMYCIN FOR COVID-19 MANAGEMENT: A SYSTEMATIC META-ANALYSIS OF META-ANALYSES

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BACKGROUND: In order to amalgamate and critically appraise the conflicting evidence around the clinical efficacy of Azithromycin (AZO) vis a vis COVID-19 management outcomes including COVID-19 associated mortality and torsadogenic effect, a meta-analysis of meta-analyses was carried out to establish an evidence-based holistic status of AZO vis a vis its efficacy as a component-in-use of the COVID-19 management protocol.

METHODS: A comprehensive systematic search was carried out through PubMed/Medline, Cochrane and Epistemonikos with a subsequent appraisal of abstracts and full-texts, as required. The Quality of Reporting of Meta-analyses (QUOROM) checklist was adopted to explore the degree of thorough reporting. The Assessment

of Multiple Systematic Reviews (AMSTAR) methodology was adopted to assess the methodological quality of the included meta-analyses. The primary study overlap was assessed by adopting the Corrected Covered Area measurement. Cochrane Review Manager 5.4 was adopted to develop Mantel-Haenszel Random-effects models in order to calculate summarized pool Odds ratio (with 95% confidence interval) for the afore determined primary and secondary outcomes including mortality and torsadogenic effect.

RESULTS: AZO, when compared with standard of care / best available therapy including or excluding Hydroxychloroquine, exhibited statistically insignificant reduction in mortality [(n= 27,204 patients) OR= 0.77 (95% CI: 0.51-1.16) (I²= 97%)], requirement of mechanical ventilation [(n= 14,908 patients) OR= 1.4 (95% CI: 0.58-3.35) (I²= 98%)], induction of arrhythmia [(n= 9,723 patients) OR= 1.21 (95% CI: 0.63-2.32) (I²= 92%)] and QTc prolongation (a surrogate for torsadogenic effect) [(n= 6,534 patients) OR= 0.62 (95% CI: 0.23-1.73) (I²= 96%)].

CONCLUSIONS: The meta-analysis of meta-analyses portrays AZO as a pharmacological agent that does not appear to have a comparatively superior clinical efficacy when it comes to COVID-19 management when compared with the best available therapy. On the flip side, it was not found to be causing arrhythmic induction or instituting a torsadogenic effect by prolonging QTc, either. However, secondary to a very real threat of anti-bacterial resistance, it is suggested that AZO be discontinued and removed from COVID-19 management protocols.

KEYWORDS:

Azithromycin, COVID-19, Torsadogenic effect

PREDICTION OF IMMEDIATE AND LATE RENAL FUNCTIONING POST-PARATHYROIDECTOMY FOR PRIMARY HYPERPARATHYROIDISM: AMALGAMATION OF ENSEMBLE APPROACH AND AUTOMATED MACHINE LEARNING

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BACKGROUND & OBJECTIVES: Prognostication and risk modelling for renal function post-parathyroidectomy undertaken for primary hyperparathyroidism (PHPT) has not been attempted before. With artificial intelligence in general and machine learning in particular exhibiting superior predictive and prognosticative capabilities, when compared with conventional statistical techniques, we explored the current state-of-the-art for automated machine learning to develop such instantaneous, precise models that predict serum creatinine and eGFR serially up till as much as 60 months prospectively using only preoperative variables.

MATERIALS & METHODS: The study population comprised 494 patients, none of whom suffered from stage 5 chronic kidney disease. [Median age: 58 Y; 79.1% females; post-op stage 1 Acute kidney injury (AKI): 41.1% of patients; post-op stage 2 AKI: 5.9%; post-op stage 3 AKI: 1.8%]. The current state of the art (SOTA) for automated Machine Learning (aML) was adopted to develop predictive models using algorithms including Neural Network, eXtreme Gradient Boosting and CatBoost with employment of hyperparameter tuning. Ensemble approach, which is the amalgamation of two or more than two algorithmic models to develop such a model which is better than either of its compute components, was superimposed. The Root Mean Square Error (RMSE) gauged the predictive ability of the developed prognostication models.

RESULTS: All of the developed prognosticative models came out to have minuscule RMSEs when predicting serum creatinine and eGFR serially from the immediate postoperative point of time to a distant post-operative 60th month with ensembling recognized to considerably decrease the RMSE. We also present novel amalgamative variables that have contributed to close-to-perfect prognostication of the proposed prognosticative suite of models including but not limited to Zehra's miscellany (i.e. the sum of preoperative creatinine & eGFR) and Khawaja's distinction (i.e. the difference of preoperative ionized calcium & eGFR).

CONCLUSIONS: Our novel approach to develop predictive prognosticative models of immediate and late postoperative renal functions for patients who have undergone parathyroidectomy for PHPT by exploring automated machine learning is the very first attempt of its nature. Adoption of the current SOTA for aML provides optimal predictions which, when incorporated into the respective management protocols, shall translate into a decrease in the morbidity associated with PHPT by assisting in risk stratification and complication triaging.

KEYWORDS: Parathyroidectomy, Primary hyperparathyroidism, Acute kidney injury, Prognostication, Automated machine learning

AMALGAMATION OF AUTO MACHINE LEARNING AND ENSEMBLE APPROACHES TO ACHIEVE STATE-OF-THE-ART POST-HEART FAILURE SURVIVAL PREDICTIONS

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INTRODUCTION: HF, the underlying cause of a significant proportion of deaths attributed to cardiovascular diseases with diabetes mellitus a universally-recognized risk factor. Studies have attested to the significance of early diagnosis and subsequent initiation of treatment as a predictor of PHM. With this context, the current SOTA among auto ML platforms for classification tasks was explored to develop models that accurately, precisely and instantaneously predict PHM.

OBJECTIVE: Adoption of Automated Machine Learning to develop predictive models for PHM

METHODS: Data was adopted as shared by Chicco D et al.(1) which was originally collected by Ahmad T et al. (2) 299 heart failure patients (35% women); age range: 40-95 years; All patients: Left ventricular systolic dysfunction and previous heart failures [New York Heart Association (NYHA) classification of the stages of heart failure: Classes III or IV]. Variables include CPK levels, Ejection fraction, serum creatinine and history of DM. The current SOTA among auto ML platforms for classification tasks, was adopted and EA was incorporated. The models developed—both: without and with the FUT—using 6 of the time-tested classification algorithms were compared in terms of MCC, F1, ACC and AUROC.

RESULTS: Upon training without the FUT (*scenario 1*), an ensemble of RF and NN algorithms achieved the highest AUROC of 89% while predicting PHM. Upon training with the FUT (*scenario 2*), an ensemble of RF and Lr algorithms exhibited the highest AUROC of 88%. Upon training only with serum creatinine and ejection fraction variables without FUT (*scenario 3*), an ensemble of RF and Xgboost algorithms achieved an ACC of 80%. The presented models outperformed those developed by Chicco D & Jurman G in all aspects with the exception of F1 score in *scenario 3*.

CONCLUSIONS: Adoption of SOTA auto ML platform and incorporation of EA significantly improve the accuracy and precision of ML models predicting post-HF survival. Such models have the potential to be incorporated into HF management protocols to achieve optimal and instantaneous risk stratification that would potentially translate into a significant decrease in the associated morbidity and mortality.

KEYWORDS: Heart failure, Mortality, Artificial Intelligence

COMPARATIVE ASSESSMENT OF VITAMIN D AND PTH AS RISK FACTORS OF MI AND THEIR CORRELATION WITH FASTING LIPID PROFILE.

Mirza Zeeshan Sikandar, Syed Imran Ali Shah, Umair Yaqub Qazi.

INTRODUCTION: Vitamin D (VitD) inadequacy has recently been implicated in the development of myocardial infarction (MI). Parathyroid hormone (PTH), which works closely with VitD in regulating calcium balance, has also been shown to exert cardiovascular effects. Clinical data on serum VitD and PTH in MI and their association with lipid profile are wanting, particularly in the local context.

OBJECTIVE: To assess serum vitamin D and PTH in MI and determine their correlation with lipid profile parameters.

MATERIALS AND METHODS: The cross-sectional comparative study assessed serum vitamin D, PTH and lipid profile in patients (n=30) with recent MI (< 1-month history). Comparisons were made with healthy age-matched controls (n=30) using independent sample t-test while correlations were determined using Pearson's correlation.

RESULTS: MI patients had lower VitD (27.52 ± 12.99 ng/mL vs. 51.10 ± 6.48 ng/mL; p=0.001) and higher PTH levels (45.51 ± 25.72 pg/mL vs. 19.90 ± 8.50 pg/mL; p=0.001). Low VitD and high PTH correlated with deranged lipid profile overall.

CONCLUSION: Low VitD and high PTH potentially increase the risk of MI through disturbance of lipid balance. Future studies employing supplementation with VitD and control of PTH may help find their role in mitigating the risk of MI.

PATTERNS AND OUTCOMES OF ILLNESSES IN MEDICAL PATIENTS ADMITTED TO HOLY FAMILY HOSPITAL DURING A THREE-MONTH PERIOD.

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BACKGROUND: Health policy makers often use data describing prevalence, morbidity and mortality to assess the burden, requirements of resources and quality of the health service. The focus of this study is to recognize the patterns and treatment outcomes of diseases in a medicine unit of Holy Family Hospital, Rawalpindi.

OBJECTIVE: To assess the pattern and treatment outcomes of illnesses presenting in a medicine department of Holy Family Hospital, Rawalpindi in period of three months.

METHODS: This descriptive cross-sectional study was undertaken from 1st March to 31st May of 2019, when all the individuals admitted in Medical Unit were approached for consent to participate in the study. Data were collected using a self-administered questionnaire-based interview of respondents. Data were analyzed by using Statistical Package for Social Sciences Version 23.

RESULTS: A total of 579 participants were enrolled into the study, out of which 374 (64.6%) were male and 205 (35.4%) were female with mean age 52.23. Majority of participants were admitted via emergency (92.23%). The most prevalent illnesses were chronic kidney disease, asthma, decompensated chronic liver disease and stroke; with hypertension being the commonest co-morbid condition (6.2%). Of those admitted to the facility, 53.5% patients were discharged according to advice and 22.5% left the hospital against medical advice. Mortality rate was 23.8%.

CONCLUSION: Patients with a wide variety of diseases were admitted to the medical unit mostly by emergency. 1 in 5 patients admitted suffered mortality.

KEYWORDS: Prevalence, Patterns of illness, Co-morbid.

COVID PROGNOSTIC SCORE (COPS) TO PREDICT PROGNOSTIC OUTCOME IN PATIENTS WITH SEVERE COVID-19 PNEUMONIA

Rizwan Qazi¹, Hafsa Atique², Saad Shakil³

BACKGROUND: Covid-19 affected Pakistan with a toll of 287,300 confirmed cases and 6153 deaths; reported by August 14th, 2020. Along with 23% mortality, massive resource insufficiency was witnessed nationally, culminating as shortage of hospital beds. Lack of covid testing facilities and swift rise of infection rate in health care workers was reported.

RATIONALE: Considering the rapid decline of basic health resources and testing facilities, it is essential to identify high risk patients and triage them before any confirmatory testing to provide early medical intervention and assess prognosis early on. Here, we have developed a score to predict the mortality of covid-infected patients early on.

OBJECTIVES: To assess the degree of medical intervention needed for treatment and its application in areas with low resources and testing facilities.

METHODS: A Retrospective Cohort study was conducted on 141 patients from June 2020 to May 2021. All PCR positive covid patients were included; excluding those who died or left within 24 hours of admission. Data was obtained from hospital record. (HIMS), incorporating sociodemographic details, history of co-morbid and presenting complaints. A Covid-Prognostic Score was developed to predict hospital outcome and severity of covid disease. It comprised of age, comorbidity (diabetes and ischemic heart disease), chest-x ray score, neutrophil-lymphocyte ratio (NLR) and ferritin score. Using SPSS version 23, descriptive means were analyzed; Chi-square test was applied along with Mann-Whitney U and linear regression. P-value less than 0.05 was considered significant.

RESULTS: A significant association was found between health status (i.e., alive or dead) and diabetes ($p=0.045$) and ischemic heart disease ($p=0.004$), which reinforced their importance in the CoPS score. Association between CoPS and gender health status was highly significant; ($p=0.003$) ($p=0.000$) respectively. A positive correlation was found between CoPS and duration of hospital stay ($R = 0.495$) ($p=216$).

CONCLUSION: The continuous surge of Covid-19 is causing hospital resource and facility burn out. The CoPS score aims to pave way for triage therapy from the point of admission. A multi-center approach and scoring of "severity strata" of disease would further corroborate the relevance of the CoPS scoring system.

KEYWORDS: Covid-19, prognostic score, age, diabetes, IHD, NLR, x-ray score, ferritin

ASSESSMENT OF SYMPTOMS SUCCEEDING COVID-19 VACCINATION IN HEALTH CARE WORKERS OF RAWALPINDI MEDICAL UNIVERSITY, PAKISTAN

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BACKGROUND: Covid-19 has come forth as a highly contagious pandemic and researchers are compelled that safe and effective vaccines are the only way to combat it. Extensive trials have been conducted but data regarding “real world symptoms” after vaccination is still lacking. Understanding the range of post vaccination symptoms is important not only for people receiving the vaccine but also for those recommending it. We aimed to compare the reactogenicity and safety of COVID 19 vaccine with respect to age, gender, previous infection with COVID 19 and history of allergies.

MATERIALS AND METHODS: Data for this cross-sectional analytical study was collected using simple randomized sampling technique via a detailed telephonic call interview of the selected health care workers and faculty of Rawalpindi Medical University and its allied hospitals between May 2021 to July 2021. However those HCWs who had co-morbidities i.e Diabetes Mellitus, Hypertension, Heart disease, lung disease, obesity, dyslipidemia, and malignancy were excluded from the study.

RESULTS: A total of 350 participants were interviewed and data was analyzed by SPSS 25. Out of 350 participants 205 (58.6%) experienced some symptom after receiving the first dose of COVID vaccine. Most common symptom was local pain at injection site (58%). Other symptoms include fatigue (41.5%), myalgia (33.2%), low grade fever (28.8%), headache (26.8%), high grade fever (6.3%), joint pain (7.8%), Giddiness (5.4%), sore throat (5.9%), nausea (4.9%), diarrhea (2%), constipation (1.5%), insomnia (1%), allergic rash (1.5%). Women were likely to experience more symptoms as well as earlier onset of symptoms. Older age was related to late appearance and longer duration of symptoms. People who have earlier been infected with COVID were likely to experience more severe symptoms. There was increased onset of symptoms in individuals having previous history of any allergies.

CONCLUSION: Two-thirds of healthcare professionals who completed the survey reported mild and short-lived symptoms after receiving first dose of COVID-19 vaccination which correlated with the findings from recent randomized control trials. These symptoms are the local and systemic manifestations of immunogenicity and reactogenicity of vaccines. No serious adverse event was reported hence further supporting the evidence for safety of these vaccines.

ASSESSMENT OF THE IMMEDIATE SIDE EFFECTS OF COVID-19 VACCINATION AMONG THE PEOPLE OF PAKISTAN

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INTRODUCTION: Coronaviruses (CoVs) are single-stranded RNA viruses that belong to the Coronaviridae family of viruses.¹ The World Health Organization (WHO) proclaimed the SARS-CoV-2 epidemic a global pandemic on March 11, 2020 and labeled it Coronavirus Infectious Disease 2019. (Covid-19). Since then, the world has been working feverishly to create SARS-CoV-2 treatments and vaccinations at an unprecedented rate.³

OBJECTIVE: To assess the immediate side effects of Covid-19 vaccination among the people of Pakistan.

METHODOLOGY: A randomized, descriptive cross-sectional study was carried out using an online questionnaire. Inclusion/Exclusion criteria: All citizens of Pakistan over the age of 12, who were eligible for the COVID-19 vaccination were enrolled. After data collection, it was entered into SPSS version 25.0 for analysis in terms of frequencies and percentages.

RESULTS: Out of 17040 participants, 76% are vaccinated. Among them 64% received Sinopharm, 30% Sinovac, 0.7% Pfizer, 0.5% Astrazeneca, 2.8% Moderna, 0.8% Cansino, 0.3% PakVac and 0.1% Sputnik V. Most participants (66%) suffered no symptoms post vaccination. Only 15% developed fever, 7% dizziness, 5% vomiting, 4% pain at injection site, 2% headache and 1% fatigue. After vaccination, 1% had a re-infection and 99% so far have not caught Covid-19. Among all participants, 87% found the vaccine safe, 7% were neutral and 5% found it unsafe.

CONCLUSION: Most Pakistanis have received the Chinese vaccine i.e. Sinopharm. Majority individuals have experienced either no to mild or few moderate type of adverse effects following immunization irrespective of the age and gender that can be easily managed at home.

RESIDUAL SYMPTOMS AND THE QUALITY OF LIFE IN INDIVIDUALS RECOVERED FROM COVID-19 INFECTION: A SURVEY FROM PAKISTAN

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BACKGROUND: There remains scarcity of literature regarding the patient's health status post-COVID-19 infection. This study analyzes the prevalence of residual symptoms and quality of life (QoL) after COVID-19.

METHODS: An anonymous online survey was administrated in Pakistan from November 2020 to April 2021 in COVID-19 survivors. The questionnaire used the 12-Item Short Form Health Survey (SF-12) to assess mental and physical QoL. Multivariate linear regression was used to explore factors associated with mental and physical QoL scores.

RESULTS: A total of 331 COVID-19 survivors participated in our survey. Around 42.0% of the cohort reported within 1-3 months of diagnosis of COVID-19. The common residual symptoms were body aches (39.9%), low mood (32.6%), and cough (30.2%). Better physical QoL was associated with being male (adjusted beta: 3.328) and having no residual symptoms (6.955). However, suffering from nausea/vomiting during initial COVID-19 infection (-4.026), being admitted to the ICU during COVID-19 infection (-9.164), and suffering from residual body aches (-5.209) and low mood (-2.959) was associated with poorer QoL. Better mental QoL was associated with being asymptomatic during initial COVID-19 infection (6.149) and post-COVID (6.685), while experiencing low mood post-COVID was associated with poorer mental QoL (-8.253 [-10.914, -5.592]).

CONCLUSION: Despite presumed "recovery" from COVID-19, patients still face a wide range of residual symptoms months after initial infection, which contributes towards poorer QoL. Healthcare professionals must remain alert to the long-lasting effects of COVID-19 infection and aim to address them appropriately to improve patients' QoL.

KEYWORDS: COVID-19; Residual Symptoms; Quality of Life

REPORTING OF ADVERSE EFFECTS AFTER VACCINATION AMONG MEDICAL STUDENTS

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INTRODUCTION: COVID 19 first reported in Dec 2019 wrapped the whole world in its grip with a large number of infected cases and deaths of people within a short span of time. There was an uproar in public for vaccines. The scientists spent day and night developing vaccines and they were introduced into the market in the shortest time possible. Unfortunately, the people including the medical students believe that vaccines were 'rushed' into use and are not safe. This surprising attitude of health care professionals is creating further unease in the general public

OBJECTIVES:

1. To evaluate the responses of medical students, COVID 19 vaccine recipients about the post- vaccination side effects
2. To correlate the post-COVID vaccine symptoms with pre-existing health diseases, gender, year of study, allergies, and smoking.
3. To evaluate which vaccine was safe in terms of symptoms in medical students
4. To know why the respondents were resistant to get vaccinated

METHODOLOGY:

Cross-sectional research based on quantitative evidence was conducted in August 2021 at Rawalpindi Medical University to analyze responses of medical students, COVID 19 vaccine recipients about the post-COVID 19 vaccination symptoms of 1st-5th year students. Self- Structured Questionnaires were distributed among 500 students, 100 from each year of study. An equal proportion of males and females was kept. The students from all 5 years of MBBS were made a part of the study. The students who didn't fill the consent form were not made a part of the study. Data was analysed using SPSS v 22. Chi-Square test was employed.

RESULTS: All 500 students were vaccinated, with the majority having been administered Sinopharm (44%), followed by Sinovac (39%) and others being Cansino, Moderna, etc., 14.2% of students had pre-existing diseases, but no relation with post-vaccination adverse effects was found. The majority 49.8% (n=249) remarked that they didn't notice any symptoms after vaccination but 36.6% reported mild symptoms, 9% moderate

symptoms, and 4.6% severe symptoms who had to be hospitalized. Pain at the inoculation site of the body (40%), and general fatigue and tiredness (34.4%) were the most prominent followed by many other symptoms. The female students reported severe and irregular menstruation as the chief post-Covid vaccine complaint. The Moderna vaccine was found to be safest with regard to side effects followed by Sinovac and Cansino. The fear of side effects and Western hype/Propaganda was found to be the main reason for hesitancy. The chi-square test applied showed no correlation of post-COVID vaccination symptoms with gender, year of study, smoking habits, allergies, and addictions.

CONCLUSIONS: All the COVID vaccines being used have a high safety profile according to scientists and researchers but many students have reported post Covid vaccine symptoms. These were manageable in some but 4.6% had severe symptoms and had to be hospitalized. Hesitancy regarding vaccination due to apprehension against its side effects is still present in medical students, but that can be eradicated only by a prolonged and continuous stream of researches exploring various effects of the COVID 19 vaccine.

KEYWORDS: vaccine, adverse effects, and medical students, COVID, Hypersensitivity, Obesity, Anaphylaxis

SPECTRUM OF CARDIOVASCULAR DISEASES, RISK FACTORS, MORBIDITY AND MORTALITY AMONG PATIENTS VISITING RAWALPINDI INSTITUTE OF CARDIOLOGY: A PROSPECTIVE STUDY

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INTRODUCTION: The spectrum of cardiovascular diseases is considerably versatile on the global level depending on the stage of epidemiological transition and risk factor profiles.

OBJECTIVE: The aim is to access the spectrum of cardiovascular diseases, risk factors, morbidity and mortality among patients visiting Rawalpindi Institute of Cardiology.

METHODS: This is a prospective study of the spectrum of cardiovascular diseases in RIC. 400 confirmed cases of CVDs were included and all those suffering from diseases other than cardiovascular disease were excluded. We collected data over 6 month's period and followed patients for further two years. The participants were selected by non-probability convenience sampling technique after informed consent. Data was analyzed via SPSS version 25. Descriptive statistics were used. Cardiovascular diseases were correlated with demographic variables and risk factors like DM, HTN, smoking, obesity and family history by using Pearson's correlation and p value < 0.05 was considered statistically significant.

RESULTS: Out of 400 participants, 63% were males and 37% were females. The spectrum of cardiovascular diseases showed that ischemic heart disease (55.53%) is the commonest disease with significantly higher proportion in 4th to 6th decade of life. After analyzing our data, we found out that there is a positive correlation between cardiovascular diseases and hypertension (p=0.000), diabetes mellitus (p=0.000) and smoking (p=0.000) while obesity and family history shows a negative association with CVDs. Follow up was conducted after two years for the two most prevalent diseases that are AWMi and IWMI. Out of 107 patients with these diseases, 89 patients (83.17%) responded and 50 patients (56.17%) showed cardiovascular endurance.

CONCLUSIONS: Ischemic heart disease is the most common cardiovascular disease among the patients of RIC and is significantly associated with a number of risk factors. Cardiovascular diseases were strongly associated with HTN, DM and smoking in these patients.

Key words: cardiovascular diseases, spectrum, risk factors, follow up.

RELATIONSHIP OF BODY MASS INDEX (BMI) WITH EATING HABITS, LIFE STYLE AND PSYCHE AMONG MEDICAL STUDENTS OF RAWALPINDI MEDICAL UNIVERSITY

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INTRODUCTION: Obesity is a complex multifactorial disease. There has been a tremendous increase in prevalence of obesity and overweight globally.

OBJECTIVE: The aim is to access relationship of BMI with eating habits, lifestyle and psyche among the medical students of RMU.

METHODS: This is a descriptive correlational study of 3 months duration from February to April in 2019 which was conducted among medical students of RMU. 240 participants were selected after informed consent. All the medical students of Rawalpindi Medical University between the age group of 15 to 30 were included except those students who are suffering from different

eating disorders, chronic illness and loco motor disturbance. Data was analyzed via SPSS version 25. Descriptive statistics were used to analyze the data. Body mass index (BMI) was correlated with physical activity, eating habits, family history, smoking, mental stress and many other factors using Pearson's correlation and p values < 0.05 was considered statistically significant.

RESULTS: Results showed that out of the 240 participants, 49.6% (n=119) were males and 50.4% (n=121) were females. Out of 240 participants, 23.8% (n=57) were under weight, 52.5% (n = 126) were healthy weight, 15.4% (n = 37) were overweight while 8.3% (n = 20) were obese. These tests revealed a significant relationship between gender (p=0.00) and BMI categories. BMI values were found to be negatively related to eating scores ($P>0.05$) indicating that higher the intake of junk food, greater the BMI value. BMI was positively correlated with physical activity duration (p=0.032). BMI had positive association with outdoor games (p=0.035) and organized sports (p=0.036). 28.7% (n=69) participants eat more in stressful situations.

CONCLUSIONS: Participants with BMI range 18.5-24.9 were more involved in physical activities and also have high overall calorie intake. Even though males are more active than females, they have higher BMI percentile values and also consume more unhealthy foods.

Key words: BMI, eating habits, lifestyle, psyche.

ASSOCIATION OF FOODS WITH HYPERTENSION: A CALL FOR ACTION

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INTRODUCTION: Hypertension (HTN) is a very prevalent health issue around the world. Many factors influence HTN and some of those include diabetes, obesity, gender, age, and diet. **OBJECTIVE:** Impact of diet on hypertension, is understudied in our region, therefore, this study was set to manifest the effect of diet on HTN prevalence.

MATERIALS AND METHODS: This cross-sectional study was performed among local Islamabad of population, Pakistan in 3 months from November 2019 to January 2020. 138 people were recruited in study via a developed criterion. Data was collected by self-designed proforma. Data analysis was done by applying IBM SPSS version 25. Descriptive statistics were used for quantitative variables. As data was non-parametric, so we applied non-parametric statistical tests like Mann Whitney test, Kruskal–Wallis test and Spearman correlation analysis were applied to assess, the difference in means of both systolic and diastolic BP between female and male, difference in means of both systolic and diastolic BP among three consumption frequency levels, and association, direction, and strength of between HTN and foods consumption.

RESULTS: Present study indicates overall high prevalence of HTN (39.86%) among study population. Means of age, systolic and diastolic BP for study population were 43.42 (with SD of ± 8.30) years, 138.01mmHg (with SD of ± 19.37), and 89.38mmHg (with SD of ± 7.10) respectively. Difference in means of both systolic and diastolic between females and males was not significant (p=0.093 and p=0.078 respectively) although these were higher among males and gender was not associated with HTN significantly (p=0.069). Strength and direction for association between fast food and HTN was strong and positive, for association between snack food and HTN was strong and positive while for association between fresh fruits and raw vegetables was strong and

negative with correlation coefficients (+0.690 for diastolic, +0.710 for systolic), (+0.651 for diastolic, +0.661 for systolic), (-0.712 for diastolic, -0.712 for systolic) respectively.

CONCLUSION: In short, present study concludes that HTN was more prevalent among males, fast food, snack foods eaters and fresh fruits and raw vegetables non-eater in contrast to females, fresh fruits and raw vegetables eaters and non-eaters of fast foods and snack foods. Higher consumption of fast foods and snack lead to higher prevalence of HTN and vice versa whereas higher consumption of fresh fruits and raw vegetables bring decline in the incidence of HTN incidence and vice versa. So, we are dependent on awareness among people about the influence of food on HTN and gender specific measures for each gender to reduce HTN incidence.

KEYWORDS: Action, association, call, foods, hypertension.

WORK-RELATED MUSCULOSKELETAL DISORDER IN HEALTH-CARE PROFESSIONALS

Javeria eraj, Waqas Ahmed

INTRODUCTION: Work-related musculoskeletal disorders (WMSDs) have a significant impact on the workplace; they have been growing as a problem in our population, especially among healthcare practitioners.

OBJECTIVES: The aim of the study was to determine the prevalence of the condition, evaluate the WMSDs experienced by HCP in different specialties and study various risk factors that contribute to the development of WMSDs.

MATERIAL AND METHODS: After gaining the ethical approval, a cross-sectional study was conducted among all health professional at Benazir Bhutto Hospital. Data were collected using a validated, standardized, and self-administered questionnaire. The data was analyzed using the standardized software SPSS 21.

RESULTS: The study result revealed that out of 260 participants, almost (111, 42.7%) experienced WMSDs. Among them, 93 (35.8%) were males, and 167 (64.2%) were females. Participants with experience of more than six years were twice as likely to develop WMSDs compared to participants with fewer years of experience [$p = 0.095$]. There was no significant difference in terms of past medical history between the two groups except for the history of having low back pain, which was more common in participants with WMSDs (73.9% versus 51.6%; $p: .000$)

CONCLUSIONS: Based on this study findings, we can conclude that WMSDs affect a high proportion of healthcare professionals; the female gender and more than six years of experience were found to be major predictors for WMSDs. Pain in the lower back, shoulders, and neck were the most frequently reported musculoskeletal complaints (MSCs). Hence, we recommend the incorporation of musculoskeletal disorder prevention programs in the hospitals' educational programs as they will reduce the rate of WMSDs and ensure the health and well-being of healthcare practitioners

KEYWORDS: Musculoskeletal, WMSD, healthcare professional, risk factor

IMPACT OF LIFESTYLE AND MEDICATION ADHERENCE ON GLYCEMIC CONTROL AND THE COMPLICATIONS ASSOCIATED WITH POOR CONTROL IN TYPE-2 DIABETIC PATIENTS

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INTRODUCTION: With estimated 19.3 million, Pakistan ranks 4th on the list of the top ten countries with most adults having undiagnosed diabetes. Studies conducted internationally indicate 87% uncontrolled diabetics in Hohoe Municipality, Ghana while 37% in Vermont and adjacent New York. The factors predisposing to poor glycemic control include age less than 50, female sex and high cost of treatment. This poor control is the major culprit behind the multiple microvascular and macrovascular complications of diabetes. For diabetes, better medication adherence has been found to be related with better glycemic control and fewer hospitalizations.

OBJECTIVE: This study aims to estimate the incidence of uncontrolled type-2 diabetes, assesses factors that predispose to this poor control, and determines the most common complications of uncontrolled type-2 diabetes in our population. Correlation between Adherence and HbA1c levels has also been established.

MATERIALS AND METHODS: A cross-sectional, questionnaire-based study, involving 426 otherwise healthy (i.e not severely ill or not having any serious infections) diabetic adults with regular monitoring of BSF, BSR

and HbA1c residing in Rawalpindi and its peripheral rural areas who presented in the diabetic clinics of Holy Family and Benazir Bhutto Hospital from Dec 2018 till Mar 2019. The questionnaire was extracted from Fiagbe et al and convenience sampling technique was used.

RESULTS: Acc. to HbA1c, 23.2% of our participants had controlled blood sugar while 76.8% did not. Statistically significant association was found among age, gender, educational level, socioeconomic status, smoking status, salt intake, knowledge on signs and control.($p<0.05$) MMAS4 and HbA1c were found to be positively correlated($r=0.449$). Microvascular complications and cataract were more significantly associated in the uncontrolled population.

CONCLUSION: Glycemic control in diabetic patients is low and it is related to unhealthy lifestyle. Old age, female gender, lower SE and education status, poor compliance to medication are all culprits behind it. The resultant higher than optimal plasma glucose levels lead to the high frequency of complications (cataracts, microvascular) as seen in our population.

KEYWORDS: Uncontrolled diabetes, Glycemic control, Medication, Adherence

SURGERY AND ALLIED

CLINICAL IMPLICATIONS OF THROMBOTIC MICROVASCULAR ANGIOPATHY (TMA) IN SEVERE AND CRITICAL COVID 19 PATIENTS

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ABSTRACT

Severe acute respiratory syndrome coronavirus has a great role in causing respiratory illness in humans and has the most important relationship of its spike proteins with host ACE-2 receptors. The data has been collected from patients presenting to Mayo Hospital Lahore with various intensities of covid infections. For the sake of reaching conclusion, severe and critical patients will be covered over the course of this Nested case-control (NCC) study. The sample size was of 350 patients between age 48 years+ 2 years. Out of these patients that were screened, 141 were classified as severe and critical stage of the disease and hence serve as subject to this focused study. The effects of this virus on platelets are rather erratic and unusual with slight decrease in the number of platelets. The raised number of d-dimers in blood of patients has been observed resulting in an elevated level of LDH. Along with D-dimer increase and platelets drop, the considerable increase of LDH is hallmark of hemolysis and endothelial damage hence pointing towards hemolytic implications and thrombotic microangiopathy. The complement system represents the first response of the host immune system to SARS-CoV-2 infection. The raised number of d dimers in blood of patients has been observed in a large number of people who have been admitted in intensive care unit. These spikes underline a “hypercoagulation” state seen in these patients.

Key words: Corona virus, Microvascular angiopathy, Nested case-control, endothelial damage

DIAGNOSTIC ACCURACY OF PERITONEAL FLUID GENEXPERT IN THE DIAGNOSIS OF INTESTINAL TUBERCULOSIS, KEEPING HISTOPATHOLOGY AS THE GOLD STANDARD

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Background: The diagnosis of abdominal tuberculosis is a major health challenge. Limited data are available to support the use of GeneXpert MTB/RIF in the diagnosis of abdominal tuberculosis. The current study is an analysis of the sensitivity and specificity of GeneXpert MTB/RIF for the diagnosis of abdominal tuberculosis, keeping histopathology as the gold standard.

Materials and methods: A prospective study was conducted in Surgery Unit-I of Holy Family hospital in the year 2017. Data of 21 patients presenting with abdominal tuberculosis were collected. The samples collected were ascitic fluid for GeneXpert and acid-fast bacilli (AFB) and a tissue sample for histopathology, which included either the enlarged lymph nodes or the involved gut segment.

Results: Out of a total of 21 patients, 10 were male and 11 were female. The predominant age group was less than 30 years with 76.2% cases. Of the 21 samples analyzed, all were positive for tuberculosis (TB) by histopathology. GeneXpert was positive in six and negative in 15 patients. The sensitivity of GeneXpert was 28.57% and specificity was 0%. The positive predictive value was 100%. The agnostic accuracy was found to be 28.57%.

Conclusion: In our study, GeneXpert has shown poor sensitivity and specificity for the detection of abdominal TB from ascitic fluid samples. On the basis of this data, we lay stress on finding new tests and biomarkers for the rapid diagnosis of abdominal TB.

Keywords: abdominal tuberculosis, genexpert

PRENATAL DIAGNOSIS OF BETA THALASSEMIA MAJOR BY CHORIONIC VILLOUS SAMPLING (CVS) AND ITS ROLE IN PREVENTION OF DISEASE BY ABORTION.

INTRODUCTION: β -thalassemia is a serious public health problem in many parts of the world. In Pakistan, It is estimated that over 4000 thalassemic children are born every year. Efficient method to reduce the disease incidence is implementation of a carrier screening program, prenatal diagnosis and selective termination of affected fetuses. Our study focused on prenatal diagnosis of β - thalassemia Major by CVS and its role in prevention of it by abortion.

METHODS: The retrospective study of 3 months duration from May to July in 2019 was conducted in thalassemia house in 172 participants, Rawalpindi. Women unwilling to appear in the interview and women having children with other genetic disorders will be excluded from our study. The participants were interviewed based on a self-designed questionnaire, developed after extensive literature search and qualitatively assessed by the institutional research committee. It also assessed about CVS result, previous CVS and abortion after CVS. Data was analyzed using SPSS version 23. Descriptive statistics were used to analyze the data. CVS results were correlated with abortion after CVS and blood group type using Pearson's correlation and p values < 0.05 was considered statistically significant.

RESULTS: Results of the study showed that mean age was 27.64 years. Most of people are B⁺ve (30.8%) while 27.3% are O⁺ve and 23.8% are A⁺ve. Other blood groups though present but are in negligible values. Most of the people in our study have total one affected child (74.4%) or two affected child (14%). Only 28.5% of people have done their CVS before while 71.5% have their CVS for first time. According to CVS, results most of people have thalassemia trait (38.4%) while 33.1% have thalassemia major and 28.5% have no thalassemia. After the results of CVS, most of the thalassemia major patients (87.7%) underwent abortion and remaining 12.3% did not opt abortion.

Conclusion: Prenatal diagnosis of beta-thalassemia major by CVS plays an important role in prevention of the disease by abortion. Awareness about Prenatal diagnosis of beta-thalassemia by CVS should be increased so that prevention by abortion can be done timely to eliminate a huge financial burden on health system and family itself.

CURRENT PRACTICE OF PREOPERATIVE NPO TIMES IN ELECTIVE SURGERY PATIENTS AT THE SURGERY DEPARTMENTS, ALLIED HOSPITALS, RAWALPINDI

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Introduction : Guidelines recommend a preoperative fasting period of 6 hours for solids and 2 hours for clear fluids. It is crucial to identify factors affecting NPO times to avoid intraoperative & postoperative complications and unwanted stay of patients in hospitals which put a strain on hospital budget.

Objective : To determine the Preoperative Fasting times and the knowledge and practice of health care professionals who provide NPO instructions.

Materials and Methods: This is a descriptive cross-sectional study, conducted at various surgical departments of Holy Family Hospital and Benazir Bhutto hospital Rawalpindi from Jan 2019-August 2019. Non-randomized Convenience Sampling was used. The study population was composed of the Employees and Elective surgery patients, whereas patients undergoing emergency surgeries were excluded. Self-prepared questionnaires were filled and data was analyzed using SPSS-23.

Results: During this study, 70 health professional and 80 patients were recruited. The results of both questionnaires were compared with ASA guidelines to find the level of discrepancy. When compared with the

internationally recommended guidelines, the average fasting time for solids was 12 hours 14 minutes (± 3 hours 27 minutes) and 10 hours 42 minutes (± 3 hours 57 minutes) for liquids. Among health professionals, only 21.42% claimed to know international guidelines. 58.6% of the health professionals believed that fasting time was same for solids and liquids. While the mean preoperative fasting times told by health professionals during interview for solids were 8.3 ± 2.5 hrs, and liquids were 6.5 ± 3.1 .

Conclusion: Preoperative NPO times in HFH and BBH are exceedingly greater than the recommended guidelines, this is reflected in the knowledge and instructions given by healthcare professionals.

Keywords: NPO, Preoperative Fasting, Elective surgery

DIAGNOSTIC ACCURACY OF SERUM UREA, CREATININE, SODIUM AND POTASSIUM FOR COMPLICATED APPENDICITIS

Mishal Maqbool, Fatima Khaliq, Amina Mehboob

Background: Acute appendicitis is a common surgical emergency and if complicated, manifesting as abscess, perforation, suppurative or gangrenous appendicitis, carries significant morbidity and mortality. Its early preoperative diagnosis can improve outcome in patients and reduce incidence of negative appendectomies. It, however, mandates identification of new diagnostic parameters for it. This retrospective study evaluates diagnostic accuracy of Serum Urea, Creatinine, Sodium and Potassium for Complicated appendicitis.

Methods: 60 patients with suspected appendicitis were grouped into Complicated and non-complicated appendicitis based on histological reports. Preoperatively CBS and RFTs were performed for Serum Urea, Creatinine, Sodium and Potassium levels in patients. Cut-off values were calculated according to data. Diagnostic strength of parameters was calculated as Specificity, Sensitivity and ROC curve analysis assessed their diagnostic accuracy.

Results: The levels of all parameters were not significantly different in Acute and Complicated appendicitis. Sodium was slightly high in Suppurative and Potassium was slightly high in Acute Appendicitis. On comparison of mean values between uncomplicated and complicated appendicitis, p- value for Serum Urea, Creatinine, Sodium and Potassium were 0.95, 0.89, 0.74, and 0.17. ROC curve analysis showed their AUC values to be 0.494, 0.533, 0.480, and 0.548. Their sensitivity and specificity for is 64.7% and 43.5% for Serum Urea, 79.4% and 34.8% for Creatinine, 77.4% and 27.3% for Sodium and 77.4% and 36.4% for Serum Potassium levels.

Conclusion:

Serum Urea, Creatinine and Serum Sodium and Potassium levels have shown a tendency to be predictive of Complicated Appendicitis but a strong association could not have been established.

Keywords: Appendicitis, Perforated appendicitis, Appendectomies, preoperative procedures

FREQUENCY OF POST-TRAUMATIC STRESS DISORDER (PTSD) AMONG ORTHOPEDIC TRAUMA PATIENTS AND ITS ASSOCIATION WITH PERSONAL PARAMETERS

Fareeha Qamar, Amna Mehboob, Junaid Khan

INTRODUCTION: Posttraumatic Stress Disorder (PTSD) is a mental issue that may happen in individuals who have encountered or seen an awful mishap, for example, a catastrophic event, a serious accident, war/battle, a terrorist act or assault. Over 70% of people worldwide experience a traumatic event in their lifetime. PTSD is the most widely recognized mental disorders happening among road traffic accident (RTA) survivors. As there is no data available on prevalence of PTSD among trauma patients in our country for referencing so this study was undertaken.

OBJECTIVE

To determine prevalence of PTSD among orthopedic trauma patients who suffer from any type of injury such as RTAs, fall, firearm injuries and others.

To evaluate the association between personal parameters (demographic variables) and PTSD.

To evaluate comorbid depression, depression and anxiety.

SETTING: Department of Orthopaedics, Benazir Bhutto Hospital, Rawalpindi. **DURATION OF STUDY:** It was 6 months after the approval of synopsis. **STUDY DESIGN:** Descriptive cross-sectional study **SUBJECT & METHODS:** Data was collected from Outpatient department (OPD) and ward of Orthopedics department of Benazir Bhutto Hospital, Rawalpindi using a general questionnaire that contained socio-demographic characteristics (age, education, occupation, marital status and others). Data on the magnitude of Posttraumatic Stress Disorder was collected using standard PCL questionnaire. The Posttraumatic Stress Disorder checklist

(PCL) comes in three versions: the PCL-Military (PCL-M), PCL-Specific (PCL-S) and PCL-Civilian (PCL-C). Posttraumatic Stress Disorder checklist-Civilian (PCL-C) was used. Depression and anxiety were measured using Patient Health Questionnaire Anxiety-Depression Scale (PHQ-ADS). These questionnaires were distributed among the patients of orthopedic department on their follow up visit after 1 month of their injury. Data was analyzed using computer software SPSS version 23.

RESULTS: Out of 200 respondents, 134 (67%) were males and 66 (33%) were females. The mean (\pm SD) age of the respondents was 33.94 (\pm 12.12) years with the maximum number of people in the age group 26-35 years (36%). 134 (67%) individuals were married. 106 (53%) were educated up to secondary level. 124 (62%) were employed and 18 (9%) were students. 124 (62%) were residents of Rawalpindi. About 104 (52%) individuals had monthly income in the range of 10,000 to 30,000. RTAs were found to be the most common cause of trauma i.e. 134 (67%) out of 200. Most of the patients were included within less than 3 months duration of respective injury. Lower limb was the most common site of injury observed i.e. 128 (64%). The prevalence of post-traumatic stress disorder was found to be 39%. Females had a higher incidence rate (63%) than males (26%). Females were 1.16 times more likely to suffer from PTSD following trauma as compared to males. About 71% of the PTSD participants had comorbid depression. Out of the total, 70 (35%) suffered from depression and 44 (22%) suffered from anxiety. The victims of RTA were more likely to experience PTSD as compared to people suffering from other types of trauma.

Conclusion: PTSD is common in Orthopaedic trauma patients. Females have a higher frequency of PTSD.

Keywords: Patient Health Questionnaire Anxiety-Depression Scale, posttraumatic Stress Disorder, road traffic accident, trauma.

PREOPERATIVE FACTORS LEADING TO CONVERSION TO OPEN PROCEDURE IN LAPROSCOPIC CHOLECYSTECTOMY

Principal and co Investigators with designation:

Nadir Mehmood, Naeem Zia, Zeeshan H Khawaja, Tariq Nawaz, Asif Zafar Malik

Introduction : Laparoscopic cholecystectomy is regarded as the gold standard treatment for gallstones. Conversion to open cholecystectomy is still common, and preoperative factors to predict conversion are useful in clinical practice. Identifications of these factors can help surgeon to plan and counsel the patient and sometimes help them opt for the open technique in the first attempt, avoiding the conversion and its negative consequences.

Objectives : To identify and assess the role of factors for conversion of laparoscopic to open cholecystectomy.

Study Design: Cross sectional comparative study

Place and Duration: District Headquarters Hospital, Rawalpindi and Holy Family Hospital, Rawalpindi from January 2011 to December 2012.

Material and Method: 240 patients were included in the study. The variables studied were age, sex, obesity, diabetes, hypertension, previous attacks of acute cholecystitis and pancreatitis, biliary colics, history of jaundice, pain, fever, a high leukocyte count and ultrasound evidence of cholecystitis. Analysis of different parameters, including patient related, intra-operative factors and surgeon related were performed and test for significance applied when indicated.

Results: Thirty-two (13.3%) operations were converted. Factors significantly associated with conversion were male gender, Pain in last 3 months, multiple calculi, gall bladder wall(>3mm) and WBC count(>11000cmm).

Conclusion: Preoperative evaluation of such factors in patients due for laparoscopic cholecystectomy may help predict difficulties for the procedure, allow patients to be better informed about possible conversion or even elective choice to open procedure.

Key words: Conversion, Preoperative risk factors for laparoscopic cholecystectomy.

COMPARING THE OUTCOMES OF THYROID SURGICAL PROCEDURES FOR BENIGN DISEASES WITH EXPERTISE OF THE SURGEON IN A TERTIARY CARE HOSPITAL IN RAWALPINDI

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Introduction: There is a lack of standardized guidelines regarding selection of appropriate thyroid surgery for patients with benign diseases. As a result, an inexperienced surgeon may select a more aggressive surgical option, which may increase the complication rate.

Objective : To compare the outcomes of thyroid surgical procedures for benign diseases with the expertise of the surgeon.

Material and Methods: A retrospective cross-sectional study from 1999 to 2018. The study setting is of a public sector tertiary care teaching hospital. Patients undergoing thyroid surgery (lobectomy with isthmectomy, subtotal thyroidectomy (STT), near total thyroidectomy (NTT), or total thyroidectomy (TT)) were included. Expertise level 1, 2 and 3 (L1, L2, L3) of the surgeon was based on years of experience or number of thyroid surgeries to their credit. Postoperative complications (hypocalcemia, recurrent laryngeal nerve (RLN) damage, airway obstruction, hemorrhage and mortality) were measured against type of thyroid surgery and expertise of the surgeon.

Results: A total of 833 thyroid surgeries were performed on 695 (83.43%) females and 138 (16.57%) males. About 502 (60.26%) STT, 228 (27.37%) TT, 61 (7.32%) NTT, 42 (5.04%) lobectomies with isthmectomies were performed, with L1, 2, and 3 surgeons performing 21.25%, 45.74% and 33% of these procedures, respectively. Surgeons with L1, 2 and 3 levels of expertise caused 49.47%, 33.45% and 17.08% of adverse events, respectively. Permanent hypocalcemia, RLN damage and mortality were significantly more common in surgeries performed by L1 compared with L2 and L3 surgeons ($P<.05$). Transient and permanent hypocalcemia, transient and permanent RLN damage and mortality were significantly more common for total thyroidectomy compared to subtotal thyroidectomy ($P<.01$).

Conclusions : Minimizing the occurrence of complications like permanent hypocalcemia, RLN damage and mortality, expertise of the surgeon and anticipated difficulty of the procedure needs to be taken into account while selecting a thyroid procedure.

Key words: Hypocalcemia, Postoperative complications, Recurrent laryngeal nerve damage, Thyroidectomy.

THE EFFECT OF COVID 19 ON MENSTRUAL CYCLE OF WOMEN OF CHILD-BEARING AGE PRINCIPAL AND CO-INVESTIGATORS

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Introduction : SARS-CoV2, a novel coronavirus, was first recognized on 12 December 2019. It came from Wuhan, China and from there a whole pandemic of acute respiratory syndrome emerged. The abrupt appearance of virus lead to many social, political, psychological and health-related consequences. The aim of this study is to find out one of the health-related consequence of COVID-19 pandemic i.e., if there are any menstrual cycle changes observed in women in relation to COVID 19.

Objective: To assess the changes in menstrual cycle of women of child-bearing age following COVID-19 infection

Materials & Methods: A descriptive cross-sectional study was done. The study population was the females of reproductive age i.e., 15 to 49 years of age that belong to the twin city of Rawalpindi and Islamabad. Women of reproductive age i.e., 15 to 49 years who had a history of COVID-19 infection and recovery were included in our research while women with a past history of menstrual problems, women using contraceptives, pregnant women and women using anticoagulants were excluded from our study. A structured self-made 15-item questionnaire was used to assess changes in menstrual cycle after COVID infection. We collected data from

various sources i.e., patients in hospitals, their families and friends, investigators' families and friends directly. Informed verbal consent was taken. The responses obtained from Questionnaire were noted down and then analyzed using the SPSS version 26. We calculated the frequency of demographics and menstrual changes observed. Then we used the Chi-Square test to determine the association of menstrual changes with various demographics. The p value of 0.05 was considered significant.

Results: 127(42.8%) out of total 297 women reported menstrual cycle changes. 59 reported an increase in cycle length while 21 reported a decrease in cycle length duration. 32 reported dysmenorrhea, 41 reported Oligomenorrhea, 18 reported Menorrhagia while intermittent bleeding was observed by 9 women. The association of changes in menstrual cycle were found to be significant with age ($p=0.008$) and also with occupation ($p=0.004$). The association with marital status and number of children was also significant (p value is 0.001).

Conclusion: The study concludes that COVID-19 infection does have an effect on women menstrual cycle. This study provides one of many aspects of COVID 19 impact on a female's health.

Keywords: menstrual cycle changes, COVID-19, coronavirus effects

EXERCISE: YES OR NO? THE EFFECT OF PREVIOUS PHYSICAL ACTIVITY ON THE PREVALENCE AND SEVERITY OF LOWER BACK PAIN IN PREGNANCY

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BACKGROUND: Pain is defined as an obnoxious and poignant experience associated with possible or definite tissue damage. Lumbo-pelvic pain is a typical plight faced by pregnant women, with prevalence reported within the range of 24 and 90 %. According to some study reports, preceding years spent on regular physical activity (PA) prior to pregnancy decreases the risk of LBP and morbidity during pregnancy.

RATIONALE: According to some study reports, preceding years spent on regular physical activity (PA) prior to pregnancy decreases the risk of LBP and morbidity during pregnancy.

OBJECTIVE: To see the effect of physical activity during the year before conception on the prevalence and severity of lower back pain during pregnancy

MATERIALS AND METHODS: The study was conducted on 115 participants at the National Institute of Health Sciences, Chak Shehzad, Islamabad. A literature-derived questionnaire having three parts was used. For the study population, pregnant woman who came for antenatal checkup in OPD with gestational age of 21 weeks or more were included. Women with a known pregnancy-related disease were excluded from the study. Data analysis was done using SPSS version 23 and Chi-square test and T test was applied.

RESULTS: The mean age of the parturient was 26.6 ± 5.0 with mean number of parities being 3.0 ± 1.7 . The percentage of participants with minimum disability score was 48%, with 41% having moderate disability and 11% with severe disability. There was a significant negative relation between the lower back pain score during pregnancy and total physical activity levels in the previous year ($p=0.000$).

CONCLUSION: The amount of physical activity affects the occurrence of lower back pain during pregnancy, there's a negative correlation between physical activity and lower back pain.

KEYWORDS: Physical activity, Lower back pain, Pregnancy, Pakistan

EFFECTIVENESS OF WOUND INFILTRATION OF LOCAL ANESTHESIA FOR POSTOPERATIVE PAIN CONTROL IN PATIENTS UNDERGOING ELECTIVE CAESAREAN SECTION AT A SECONDARY CARE HOSPITAL: A PLACEBO BASED TRIPLE BLIND STUDY

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BACKGROUND: Adequate pain relief is vital for early recovery and mobilization after surgery. It is especially important in caesarean section patients to allow mother-child bonding soon after the surgery and for the initiation of breast-feeding.

STUDY OF RISK FACTORS ASSOCIATED WITH MYOPIA IN MEDICAL STUDENTS: A CASE-CONTROL STUDY

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Background: Myopia has emerged as a serious vision-threatening disease globally. Due to its increasing prevalence in the last few decades, it is now considered that along with genetics, environmental and lifestyle factors are also playing some role in the development of myopia.

Objective : To evaluate the effects of various risk factors in the development and progression of myopia by comparing them with people without myopia.

Methods: A case-control study was conducted on 330 medical students (males=140 and females=190) of a public institute from April to September 2019. Cases includes students who were diagnosed with myopia and wear glasses or contact lens for it. Whereas, controls were the students without any visual defect. Data was collected through non-probability convenience sampling from participants between 18 to 25 years from all five years of MBBS. Those with vision defects other than myopia e.g. hypermetropia, keratoconus, glaucoma, etc. were excluded. Data was entered and analyzed using Statistical Package for

Social Sciences (SPSS) version 25 by applying the non-parametric tests and descriptive statistics.

Results: Among 330 participants, 185 (56%) had myopia which increased rapidly between the age of 15 to 20 years in the majority of them. 52.5 % of myopics had a family history of myopia. Males were less likely to develop myopia than females (OR=0.65). There was no statistically significant difference in sleeping hours (p-value=0.46), screen exposure time (p-value=0.78) or study hours (p-value=0.15) between myopics and non-myopics. Both groups often take

breaks during the study. However, non-myopics were significantly more physically active than myopics (p-value=0.025) which shows that low physical activity is associated with the development of myopia.

Conclusion: There is not any significant effect of sleeping hours, screen exposure time, study hours, or breaks during the study on myopia. Myopia is more prevalent in people with a family history of myopia, females, and those with little physical activity.

Keywords: myopia, prevalence, gender, risk factors, exercise, sleep, screen exposure, medical students.

FREQUENCY OF PSYCHOLOGICAL BURDEN IN FEMALE MEDICAL STUDENTS WITH OR WITHOUT POLYCYSTIC OVARY SYNDROME

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Introduction : Polycystic ovarian syndrome (PCOS) is considered one of the most common reproductive endocrine disorders affecting about 6-8% of women of reproductive age. Most of the studies show higher rates of depression and anxiety among women with PCOS than in the general population. According to international and Indian guidelines psychological factors must be considered in all women with PCOS and they must be screened for anxiety and depression. Despite the negative impact of PCOS on the quality of life, its psychological implications are under-estimated and often ignored. Thus, this study aims to assess the prevalence of psychological burden specifically among female medical students with and without diagnosed polycystic ovarian syndrome.

Methodology: A comparative cross-sectional study was conducted at IMDC from August to November, 2021. 206 female medical students were included in the study. All students with or without PCOS were included. Those who had other medical complications like thyroid dysfunction, androgen secreting tumours, congenital adrenal hyperplasia and advanced liver and renal diseases were excluded from the study. The menstrual, acne, hirsutism (ferriman-gallwey scoring system), psychological burden [depression, anxiety and stress details (DASS-21)] were assayed by a valid and reliable, pretested questionnaire. Using SPSS version 23, descriptive means were analysed; Chi-square test was applied to compare variables. P-value less than 0.05 was considered significant.

Results: 26 out of 206 (12.6%) were positively diagnosed with PCOS. Despite this, 62 (30.1%) had an irregular cycle for most of the year while 87.3% had moderate to severe hirsutism, suggesting an underdiagnosis

($p=.000^*$). Regarding symptoms of PCOS, 97(47.1%) suffered from acne and 50 (24.3%) had BMI of 25 or above. Menstrual irregularity association with DAS (Depression, Anxiety, Stress) was $p=.001^*$, $p>0.05$ and $p=.015^*$ respectively. Comparison between hirsute status with stress ($p=.000^*$) and anxiety ($p=.037^*$) amounted statistical significance while depression did not ($p>0.05$).

Conclusion: This study concluded that majority of the study population had symptoms (i.e., menstrual irregularities, obesity, acne and hirsutism) of polycystic ovarian syndrome despite being undiagnosed. A consequently significant psychological burden in student with PCOS symptoms or diagnosis calls for an increased awareness and timely intervention for healthier future prospects.

IMPACT OF ROUTINE FOOTWEAR ON FOOT HEALTH: A STUDY ON PLANTAR FASCIITIS

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Introduction : Heel pain is one of the most common foot complain presenting in the orthopedic clinics and plantar fasciitis accounts for about 80% of such cases. It is important for optimizing footwear design to ensure the comfort and health of the person wearing them. Thus, this study was planned to unmask the effect of routine footwear in causing plantar fasciitis by studying the footwear worn daily by the patients. **Objective :** Thus this study was planned to investigate impact of routine footwear on foot health by highlighting different features of the shoes worn daily by the people having plantar fasciitis.

Methods: A cross-sectional study was conducted in the orthopaedics 'outpatient department of a tertiary-care hospital in Pakistan. Data was collected using non-probability convenient sampling from 101 people diagnosed with plantar fasciitis. Their routine footwear was categorized as appropriate or inappropriate on basis of heel height, sole thickness, and insole type (hard/cushioned/arched). Data were collected using a self-designed questionnaire and analysed by applying descriptive statistics and non-parametric tests.

Results: The majority (83.2%) of the people wear inappropriate shoes, whereas only 16.8% wear the recommended shoes, i.e. with heel height between 0.5-4cm, thick soles, and arched or cushioned insoles. About 82.2% of plantar fasciitis patients reported wearing shoes of minimal heel height and 55.5% wore shoes with hard, non-cushioned insole without built-in arch support. Participants who wear inappropriate shoes experience more severe heel pain ($P 0.013$) which limits their daily activities.

Conclusions: Footwear plays an important role in causing plantar fasciitis as the majority of the diagnosed cases wear inappropriate shoes with minimal heel height, thin sole, and hard insole without any built-in arch support.

Keywords:

Heel pain, plantar fasciitis, shoes, prevention and control

EFFECT ON QUALITY OF LIFE AND BODY IMAGE OF MASTECTOMY AMONG BREAST CANCER SURVIVORS: A DESCRIPTIVE STUDY.

Background and aims

Breast cancer is one of the most common type of cancer in women worldwide and the principal cause of death among women in developing as well as developed countries. It is the second leading cause of cancer-related deaths among women.¹ Quality of life is the major concern among the survivors of breast cancer in developing countries where reconstruction surgery is only available at the limited institutes and health care centres.² Particularly debilitating upon body image are the alterations of breasts and hair loss. The removal of the entire breast causes loss of symmetry, an obvious change in physical appearance particularly because they are out of the individual's control can therefore adversely impact upon body image, feelings of femininity, especially in women with a high expectation of physical beauty.^{3,4} This study aims on the effect of mastectomy on the body image and quality of life of women and relationship between body image and quality of life. Evidence obtained

from this study may further contribute to need to introduce breast reconstruction surgeries in government hospitals to improve quality of life of breast cancer survivors.

Methods: Study design: Descriptive study. **Settings:** Surgical unit 1, Holy Family Hospital, Rawalpindi.

Duration of study: 4 months at Breast Clinic SU-1 **Sample size:** 53 via epi.info **Sampling technique:** Purposive sampling technique **Data collection tool:** Questionnaire (consisting of functional scales and symptom scales)⁹.

Results: Out of 54 patients, 22 are less than 45 years old and 32 more than 45 years old. Most of them are uneducated (34) or have primary education and belonged to middle class (44). Most of them enrolled have invasive carcinoma and went under Modified Radical Mastectomy (49). Neo adjuvant (24), adjuvant (52) and hormonal therapy (4) are treatment modalities used along with mastectomy. Chi Sq performed showed significant relation between non-working women (house wife) and advanced stage of cancer in women presenting at breast clinic. According to the results of the linear regression analysis, it was revealed that there was a highly significant relationship among FACT-B physical well-being, functional well-being, emotional well-being, additional concerns sub-scales, total FACT-B and body image, and there was not a significant relationship between social/family well-being subscales and body image.

Conclusions : Patients having poor quality of life and body image, there is much need of breast reconstruction surgery to be available at government hospitals. to improve their body image.

Keywords: Mastectomy, Body image, Negative body image, Quality of Life, neo adjuvant chemotherapy, adjuvant chemotherapy

INTRAVENOUS ANALGESIA VERSUS THORACIC EPIDURAL CATHETERIZATION IN MODERATELY SEVERE PANCREATITIS: A RANDOMIZED CONTROLLED TRIAL IN A TERTIARY CARE HEALTH FACILITY

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Introduction : Acute pancreatitis is an inflammatory condition of pancreas whose incidence in United States of America has reached 35/100000 population. Sudden onset of severe abdominal pain is hallmark of acute pancreatitis commonly localized to epigastric region and radiates like a belt around trunk into back. Pain relief is mainstay of treatment.

Objective : To evaluate the two most commonly used methods for pain relief in acute pancreatitis i.e. epidural analgesia and I/V analgesia and compared the results

Materials and methods: Patients presenting with acute pancreatitis with moderate severity were divided into groups A and B. In group A patients, epidural catheter was passed at T9-T10 level epidural space and they received 0.125% Bupivacaine injection every 4 hours, while group B patients received combination analgesia in the form of IV tramadol 100mg TDS and IV Toradol 30mg BD. Pain was assessed by using visual analog scale (VAS) at 12-hour intervals. Rescue analgesia, in the form of IV paracetamol 1g given in the case of >7 VAS score was also recorded.

Results: Total 100 patients were included according to the inclusion criteria of the study. Patients were randomly divided into two groups; Group A (Epidural) and group B (intravenous). Mean age (years) in the study was 42.39±11.21 whereas there were 37 male and 63 female patients who were included in the study. In our study, mean pain score in group A was 3.16±1.23 which was significantly lower than group B (5.42±1.01), p-value < 0.0001. There was a single mortality in the study. 6 patients required ventilatory support due to respiratory complications, 5 in group B and 1 in group A.

Conclusion : Epidural analgesia is superior to I/V analgesics in pain management of moderately severe pancreatitis and it also reduces respiratory morbidity in these patients.

Keywords: Catheterization, Intravenous Analgesia, Pancreatitis, Paracetamol

PUBLIC HEALTH

PRE PANDEMIC TO PANDEMIC: TRACKING SCREEN TIME AMONG STUDENTS AND ITS ASSOCIATION WITH EYESTRAIN, SLEEP DISTURBANCES AND HEADACHE

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BACKGROUND: Lockdown measures during COVID-19 pandemic led to an increased reliance on screens. Our objective was to assess the usage of screens pre and during pandemic and to determine the association of increased screen time with frequency of headaches, digital eye strain and sleep disturbances among undergraduate students.

METHODOLOGY: An analytical cross-sectional study using non-probability sampling technique was conducted among university students of twin cities taking online classes with sample size of 413. A self-developed semi-structured questionnaire was shared through google forms after 5% of sample size pretesting. SPSS 23.0 was used for data analysis. Descriptive analysis was done through percentages, frequencies, means and standard deviation calculations. Paired t-tests and chi-square tests were used with significant results at p-value < 0.05.

RESULTS: Out of 413 participants, 60.5% were females. There was an increase of 4.34 hours of average screen time from before the pandemic. The frequency of eye symptoms increased about 42% once a week and 15.7% immediately following online classes. About 33% of students experienced headache once a week, while 8.7% of students reported these symptoms immediately following online classes. Association between eye symptoms and headache with increased screen time was significant with p-values < 0.05 and < 0.001 respectively. Over 69.5% students agreed that an increase in screen time affected their quality of sleep (p-value < 0.001) and 79.2% of students felt drowsy due to inadequate sleep at night from online classes.

CONCLUSIONS: Our study concludes that there was a significant increase in screen time from before the pandemic to during the pandemic due to implementation of online classes and that an association exists between frequency of headache, digital eye strain and sleep disturbances with increased screen time during pandemic.

KEYWORDS: Screen time, headache, sleep, COVID-19, eye strain.

KNOWLEDGE, ATTITUDE AND PRACTICE AMONG MEDICAL STUDENTS REGARDING BASIC LIFE SUPPORT (BLS)

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INTRODUCTION: Cardiac Arrest and Heart Failures are important causes of mortality in developed and developing countries and even a second spent without Cardiopulmonary Resuscitation (CPR) increases the risk of mortality. Young doctors are expected to partake in CPR from the first day and if they are not taught basic life support (BLS) skills during their studies. They have next to no opportunity to learn them in clinical settings

OBJECTIVES:

1. To determine the exact level of knowledge of Basic Life Support among medical students
2. To compare the degree of knowledge among 1st and 2nd year medical students of RMU (Rawalpindi Medical University), using self-structured questionnaires.

METHODOLOGY: A cross sectional study was conducted in March 2020 at Rawalpindi Medical University in order to analyse theoretical and practical knowledge of Basic Life Support among Medical Students of 1st and 2nd year MBBS. Self-Structured Questionnaires were distributed among 300 students, 150 from 1st year and 150 from 2nd year. The students of 1st and 2nd year were included in the study, while the students of clinical years were excluded. Data was analysed using SPSS v 22. Chi Square test was employed.

RESULTS: The results showed that only 13 (4%) students had received formal BLS training. 129 (42%) students had encountered accidents in real life but had not known how to react. Majority responded that Basic Life Support should be made part of medical college curriculum (189 students), 194 participants (64%) had moderate

knowledge of both theoretical and practical aspects of BLS. 75-80% students of both 1st and 2nd year had only moderate knowledge, which must be improved for them to be better healthcare providers in future. It was also found that male students had more practical knowledge than females, but both had almost the same proficiency in theoretical knowledge.

CONCLUSIONS: The study concluded that the level of knowledge of BLS among the students was not up to the mark, and there is a dire need to include BLS training in the medical colleges 'curriculum.

KEYWORDS: Cardiopulmonary Resuscitation, Heart arrest, Medical Students, awareness, knowledge

APPROACH OF MBBS STUDENTS RECEIVING MODULAR VS STUDENTS RECEIVING CONVENTIONAL MODE OF EDUCATION TOWARDS HEALTH RESEARCH-A COMPARATIVE STUDY!

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Introduction and objective: Health research training is an important component of medical curriculum. This study was conducted to compare the approach of medical students being taught through integrated modular curriculum with the students receiving conventional mode of education towards health research.

Material and Methods: A cross sectional study was conducted between 3rd year MBBS students following Lecture Based Learning and Problem Based learning (group A and B respectively). A self-designed pretested questionnaire was filled by 153 students of each group (from group A in 2019 and from group B in 2020) through simple randomized sampling technique. Analysis was done using SPSS 21. P value <0.05 was considered to be significant for all purposes.

Results: Mean knowledge score of PBL students was 50% against a score of 55.5% of LBL students (p-value; 0.114). However, mean attitude score of PBL students was 79.2% against a score of 67.4% of LBL students (p-value; <0.000). Over 49.6% LBL students and 41.8% PBL students had satisfactory knowledge. 19.7% of LBL students and 82.3% of PBL students had satisfactory attitude.

Conclusion: Significantly higher attitude of PBL students was found. However, level of knowledge was found to be same in both groups. PBL curriculum have a positive influence on students on their attitude towards health research.

Key words: Students, Research, comparative study.

PEER PRESSURE AND ITS ASSOCIATION WITH ACADEMIC PERFORMANCE OF MEDICAL STUDENTS: A CROSS-SECTIONAL STUDY

Wajid Zahoor Mughal

Objective: The objective of our study was to assess the effects of peer pressure on medical students 'academic performance, interest, social association and cultural parenting.

Study Design: It was a descriptive cross-sectional study.

Setting: The study was carried out among the students of medical colleges of Pakistan.

Materials and Method: A validated questionnaire consisting of 36 questions was used to collect data online on 320 participants 'socio-demographic characteristics, social association, interest, cultural parenting influence and learning from Feb 2021 to July 2021.

Results: A total of 320 medical students participated in study. Weighted mean was calculated. The weighted average of perceived peer pressure level for medical students' social affiliation was calculated. Students felt they agree with the word accompanied by their school peers.

The weighted mean of 3.28, 3.77, and 3.43, respectively, for the statements "I want to experience a relationship," "Most of my friends in school perform well in examinations," and "I like starting new activities," was read as agree. This means that students desired to discover new things, try new things, and get involved in new activities. Students observed that they agreed with the phrase that in learning they need their mates in school in order to achieve and accomplish specific school assignments and activities.

Conclusion: Peer pressure had an effect on medical students' academic achievement. Furthermore, medical students' academic performance and attitude were influenced by cultural parenting among parents and social association. Medical students' performance was shown to be influenced by their level of interest and learning.

Keywords: peer-pressure, academic performance, medical students

helminthiasis (p -value=0.04). Parents who believe that it is safe to give deworming medicine to children who do not have soil-transmitted helminthiasis have significantly higher odds (4.51) of giving deworming medicine to their children than those parents who believe it to be unsafe.

Conclusion: Majority of the parents have adequate overall knowledge about soil-transmitted helminthiasis and consider it to be harmful for children's health. However, most parents are uncertain about the safety of deworming medicines.

Keywords: Helminthiasis, Parents, Public health, Children's health.

WILLINGNESS OF MEDICAL STUDENTS TO VOLUNTEER FOR ASSISTANCE OF DOCTORS DURING THE COVID-19 PANDEMIC: A CROSS-SECTIONAL STUDY

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Introduction: In light of the COVID-19 pandemic, many medical colleges suspended on campus classes as well as clinical rotations. During the pandemic, volunteer recruitment drives for medical students were conducted in Pakistan due to staff shortage in the hospitals, but there were no surveys on the views of Pakistani medical students towards volunteerism.

Objectives : To assess the willingness of medical students to volunteer for assistance of doctors during the COVID-19 pandemic together with their motivations and perceived barriers towards volunteerism.

Materials and Methods: This cross-sectional study was conducted from 12th June 2020 to 20th June 2020 among 282 medical students of Rawalpindi Medical University selected via convenience sampling. Students enrolled in clinical years (3rd, 4th, 5th year) were included in the study. Pre-clinical year students (1st and 2nd year) were excluded. The online survey included questions pertaining to why or why not students wished to volunteer. SPSS version 25 was used for analysis.

Results: More participants (52.1%) were unwilling to volunteer. Most of those who wanted to volunteer preferred to do so by providing indirect healthcare via telemedicine. The most popular reason for wanting to volunteer was an ethical inclination to help. The main barriers towards volunteering were the possibility of being vectors for viral transmission, consuming personal protective equipment that healthcare personnel need, and contracting COVID-19. Those who believed that telemedicine should be the only avenue for student volunteerism were significantly less likely to volunteer. (Odds ratio=0.333, $p=0.001$)

Conclusion: More students were unwilling to volunteer as compared to those who were willing to volunteer for assistance of doctors during the COVID-19 pandemic.

Keywords: COVID-19, Medical Education, Medical Students, Pandemics, Volunteerism

KNOWLEDGE, ATTITUDE AND SELF-REPORTED PRACTICES OF HEALTH SCIENCES STUDENTS REGARDING HOSPITAL ACQUIRED INFECTION CONTROL PROTOCOLS

Alishba Ashraf Khan, Hiba Tariq (4th year MBBS, RMU)

Dr. Sidra Hamid (Assistant Professor Physiology, Rawalpindi Medical University)

Introduction : Hospital acquired infections HAIs are a leading cause of morbidity and mortality in hospitals and can contribute to prolonged hospital stay and increased health care costs. ¹

Infection control protocols, like hand hygiene and use of personal protection equipment, have shown to significantly decrease the rate of nosocomial infections. ²

Objective : To assess the knowledge and self-reported practices of students towards prevention of HAIs and to assess attitudes of students towards importance of infection control and perceived barriers towards adherence to infection control

Materials and methods: A cross-sectional study design was conducted at Rawalpindi Medical University from March to December 2019 on health sciences students. Health care students (MBBS, Allied Health Sciences, nursing) in their clinical years of education i.e. 3rd, 4th and final year were included in the study while students having any obsessive compulsive disorders were excluded. A self-made, self-administered questionnaire developed from WHO guidelines for prevention of HAIs ⁴. Data was analyzed in SPSS v25.

Results: Out of total, 60(36.4%) students were from MBBS, 48(29.1%) from AHS and 57(34.5%) from nursing. Mean knowledge score was 9.78 ± 1.87 out of 15 and mean practice score was 5.52 ± 1.97 out of 9. Knowledge scores were significantly different among different courses with nursing students having the highest knowledge

and practice scores. Only 50(30.3%) students knew that needles should not be recapped after use and 118(71.5%) students practiced recapping needles after use. Majority (97.0%) were in favor of intervention in curriculum to treat standard precautions. Students perceived lack of supplies (84.2%) as the major barrier towards adhering to protocols followed by lack of time (77.0%) and forgetfulness (62.4%)

Conclusion

Majority of the students had an acceptable knowledge score with nursing students scoring the highest in knowledge and practice domains. Students scored better in some domains (like hand hygiene) compared to the others (needle stick injuries). A sizeable majority was unaware that used needles should not be recapped as it increases the chance of acquiring a needle stick injury⁴. Students showed a positive attitude towards learning about infection prevention and majority were willing to improve their adherence to standard precautions. Majority of the students believed there should be intervention in curriculum to better teach infection prevention protocols.

Keywords: Infection control, hand hygiene, standard precautions, knowledge, attitudes.

STETHOSCOPE, YOUR FRIEND OF FOE: AWARENESS AMONG HEALTHCARE WORKERS REGARDING STETHOSCOPE AS A SOURCE OF NOSOCOMIAL INFECTIONS

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BACKGROUND: The increased dependence of doctors on various medical instruments has not only helped greatly in assuring early diagnosis and prompt treatment but it also has put the patients at a greater risk of acquiring infections in hospitals. Stethoscopes can be a potential source of spread of nosocomial infections due to the transfer of organisms from the patient's skin-flora to other patients 'and finally to the community. The **objective** of the study was to determine the frequency of awareness among HCWs regarding stethoscope as a potential source of HAIs, their cleaning practices and presence or absence of hospital issued guidelines regarding disinfecting stethoscope.

METHODOLOGY: A descriptive cross-sectional, pilot study has been conducted from August 2021 and is still under progress. Out of a sample size of 384, data were collected from 140 participants through probability sampling using a self-designed, pre-tested questionnaire. Final year medical students, house officers, residents and consultants working in Allied Hospitals of Rawalpindi Medical University were included. Whereas, medical students of pre-clinical years were excluded. Data were entered in SPSSv26. Descriptive statistics were applied.

RESULTS: Participants from both genders included 30 participants from the final year, 41 house officers, 33 postgraduate trainees and 36 consultants. A total of 100% were aware of stethoscopes as a possible source of nosocomial infections. The major source of their awareness was web-based resources (57.1%). Only 5(3.6%) participants cleaned their stethoscopes per patient while a significant 17% never cleaned them. 51(36.4%) of the medical workers used merely tissue paper to clean the stethoscopes. 85.7% agreed to having proper hospital guidelines. But 97.9% agreed to have no accountability criteria for the assessment of their cleanliness.

CONCLUSION: Although, the healthcare workers are adequately aware of stethoscopes being a potential source of nosocomial infections, yet they seem to be ignorant of the international guidelines and do not sufficiently practise its disinfection. There is a need to establish a proper accountability criterion by the hospital teams in order to ensure its proper practice.

KEYWORDS: Nosocomial Infections, Healthcare Workers, Stethoscope

ASSOCIATION BETWEEN NUTRITIONAL STATUS AND FUNCTIONAL CAPACITY OF ELDERLY

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Introduction : In Pakistan people of age 60 years and above constitute approximately 5.54% of total population. In this seldom neglected group of population, the most common cause of disability is malnutrition which is usually insufficiently treated. Therefore, this study was carried out with the objective to determine the association between nutritional status and functional capacity of the elderly.

Materials & Methods: This descriptive cross-sectional study has been conducted in the OPD of Holy Family Hospital, Rawalpindi and is still in progress. A 100 out of sample size of 384 individuals, aged 60 years and above, were included while those individuals with severe terminal illness, bedridden patients, comatose patients, patients on Total Parenteral Nutrition and those who are paralyzed were excluded. The sampling technique used was non-probability convenience sampling. Preformed and pretested questionnaires; Mini Nutritional Assessment Scale and Katz Index, were used to assess the nutritional status and functional capacity respectively via one-on-one interviews. Descriptive statistics were applied via SPSSv22. Chi's square test was used to compare functional capacity in patients with normal nutritional status, at risk of malnutrition and individuals who were malnourished.

Results: Out of 100 included participants, 57% were male while 43% were female, 63% were married, 9% were divorced, 28% were widowed, 9% ran any sort of business, 54% were retired, 75% lived in a joint family, 25% in a nuclear family, while none lived alone, 28% were diabetics, 45% were hypertensive, 14% had ischemic heart disease, 4% had renal disease, 16% had liver disease, 44% had osteoarthritis, while 2% had thyroid related disorders. A statistically significant association between nutritional status and functional capacity of elderly was observed. ($p=0.000$)

Conclusion: Well Nourished elderly have better Functional Capacity

Keywords: Elderly; Functional Capacity; Nutritional Status

ACADEMIC PERFORMANCE AND PERCEPTION OF STUDENTS AFTER ONE YEAR OF ONLINE TEACHING

Ahmed Rafay, Jaudat Zahra (4th Year MBBS, HITEC-IMS)

Background: Social restriction during pandemic has halted classroom teaching in all institutions worldwide, shifting to online education system. Impact of online teaching on academic performance is being studied internationally and has reportedly not improved students' performance in developing countries where online teaching technology is lagging behind.

Objective: To determine the change in academic performance and perception of students after one year of online teaching.

Methods: It is a cross sectional survey conducted in a medical college in a period of one month. A total number of 54 students from a class of 4th year MBBS were selected using systematic random sampling. Information was collected regarding demographic variables and academic performance measured by changes in percentage scores in final professional exams before start of online education and one year later, changes in self-study duration in hours and attendance percentage before and after online teaching, and perception of students about online teaching in terms of conducive environment, confidence in topics learned and preference of online teaching in future.

Results: Majority students were females, and residing in hostels. A decrease in mean scores was observed after one year of online teaching ($p=0.000$), decrease in mean self-study duration (0.000) and decrease in attendance percentage ($p=0.446$). Majority students didn't have confidence in topics learned and considered online teaching environment as non-conducive. Majority students didn't prefer continuing online education in future.

Conclusion: This study suggests a decrease in academic performance after one year of online teaching and a poor perception of students. However, linking poor performance with online education needs to be studied by more robust studies adjusting for confounding factors of academic performance.

Keywords: Online education, scores, perception, self-study, conducive.

KNOWLEDGE, ATTITUDE AND PRACTICE OF GENERAL PUBLIC TOWARDS COVID-19 VACCINE

Marwah Samee (4th Year MBBS, HITEC-IMS)

Background: The World Health Organization called the new virus COVID-19 in February 2020. Toward the end of March, COVID-19 had become a pandemic and spread to over 203 countries and territories. Despite the availability of vaccines, people are hesitant towards getting vaccinated due to (1) the risk-benefit of vaccines; (2) knowledge and awareness issues; and (3) religious, cultural, gender, or socio-economic factors. Analysis of

such factors is needed to address COVID-19 vaccine hesitancy, following the assessment of the scope and magnitude of this public health threat. This can help in guiding interventional measures aimed at building and maintaining responses to tackle this threat.

Methods: A descriptive cross sectional study was carried out at HIT, Taxila, Wah cantt and Rawalpindi following convenience sampling technique. A prestructured close ended questionnaire was circulated among 150 people within the ages of 30-60yrs and data was manually collected and entered into SPSS. The results were presented as percentages, frequencies, pie charts, means and standard deviations as deemed appropriate.

Results: Most of the participants had positive attitude towards covid 19 vaccination. 89.3% of people knew about COVID-19. 73.3% were already vaccinated. 70.7% of people were willing to get COVID-19 vaccination without hesitation. Females were more hesitant towards COVID-19 vaccination as compared to males ($P=0.019$). The participants of low socioeconomic class were more hesitant towards COVID-19 vaccination ($P=0.012$). Awareness reading COVID-19 vaccine improves with the educational status of the participants ($P=0.007$).

Conclusion: This study evaluates the knowledge, practice and attitude of general population towards COVID-19 vaccination and highlights the need to educate people about the importance of vaccination to reduce infectivity, morbidity and mortality.

Keywords: COVID-19; vaccine hesitancy; SARS-CoV-2 vaccine; Vaccine safety; social media; immunization.

KNOWLEDGE, ATTITUDE AND PERCEPTION RELATED TO BLOOD DONATION AMONG MEDICAL STUDENTS

Muhammad Sabih (4th year, HITEC IMS)

Introduction : Blood donation is an essential practice and one of the common ways one can give back to their community, it plays an eminent role in healthcare so much so that an adequate amount of blood is needed in all health care facilities in order to meet its urgent need. According to WHO, about 1 % of nation's population should donate blood voluntarily to meet the basic need of blood and blood products. Despite the general recognition of its importance, there is a meagre population that donates blood, leading to a perpetual lacking and a high demand. To eradicate this problem, considerable efforts are required to encourage a safe practice of blood donation. Keeping in view it's significance, our study aimed at assessing knowledge, attitude and perception of medical students regarding blood donation and transfusions.

Methods: A cross-sectional survey of 310 students was conducted from April-May 2021 through a questionnaire and collected data was analysed using SPSS version 21.

Results: Out of total 310 participants, 145 participants had good knowledge, 158 participants had adequate knowledge, and 7 participants had poor knowledge. A total of 57 participants had donated blood in the past and only 6 participants had received transfusions. Results also depicted attitude among medical students regarding blood donations. Out of total 310 participants, 274 participants had a positive attitude and 36 participants had poor attitude. Reasons for not donating blood were analyzed, where majority voted for never being asked for blood donations.

Conclusion: The study revealed adequate knowledge and an overall positive attitude. Better results were depicted by males and those who had practiced blood donations in the past. But in order to achieve improved results, health education is recommended.

Keywords: Blood donation, knowledge, attitude, medical students.

EFFECTIVENESS OF ONLINE COVID COURSES IN PREVENTION AND AWARENESS OF COVID-19 PANDEMIC AMONG DOCTORS AND PARAMEDICS.

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Introduction: One of the strategies to deal with the COVID-19 pandemic was Continuing Medical Education (CME) Online Courses with CME accreditation offered by various renowned universities and platforms for mass awareness and prevention regarding COVID-19 among healthcare professionals.

Objective: This study was aimed to evaluate the practical significance of these courses in clinical practice and the effectiveness of these courses in revolutionizing and improving COVID-19 case diagnosis and management.

Methodology: The multi-centric, cross-sectional study was conducted at various hospitals of Pakistan using a validated questionnaire that was filled by doctors and paramedics from 15th April 2021 to 20th May 2021. Snowball sampling was carried out by sending the questionnaire through social media platforms. We also reached out to the American Society of Microbiology to share the questionnaire with the doctors and paramedics who participated in their Online COVID course held in collaboration with NIH (National Institute of Health), Pakistan. The sample size was 225 and the data was assessed by IBM-SPSS version 26 where Chi-square test was applied to find out statistical significance.

Results: A total of 244 responses were collected from doctors and paramedics from different hospitals in Pakistan. The majority of participants attended the COVID awareness course by WHO, a COVID course by Harvard, and UHS Pakistan. 64.8% reported that the course was relevant to their current scope of practice and the information presented in the CME activity was balanced and free from commercial bias. We found that the courses contributed to the professional growth of the participants and also met their learning objectives. (Pearson's Chi-Square, P-value <0.05) More than half of the participants reported that they'll implement the knowledge gained from the courses in patient care. The rest of the participants required additional information and found a lack of PPE and COVID-19 diagnostic kits as perceived barriers in the implementation of acquired skills in practice. A significant number of participants reported that there is a need for new protocols, a more flexible system and New Online programs and Awareness campaigns regarding CME activity.

Conclusion: The online COVID courses proved to be effective in the prevention and awareness of the COVID-19 pandemic among doctors and paramedics.

Keywords: Online courses, COVID-19, Doctors, Paramedics.

KNOWLEDGE, ATTITUDE AND PRACTICE OF PLASMA DONATION AMONG COVID-19 RECOVERED PATIENTS IN RAWALPINDI, PAKISTAN: A CROSS-SECTIONAL STUDY

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Introduction/Objective : Since its inception as a life-saving treatment for severely sick COVID-19 patients, convalescent plasma therapy has received widespread recognition. This study sought to ascertain survivors' knowledge, attitudes, and practice about plasma donation.

Methodology: In Rawalpindi, Pakistan, a cross-sectional study was performed among COVID-19 recovered patients. Simple random sampling was used to choose 383 people. The data collection instrument was a pre-structured online questionnaire. SPSS version 26 was used to enter and analyze the data. We used binomial and multinomial logistic regression.

Results: 223 (58.2 percent) and 326 (85.1 percent) of 383 individuals had sufficient knowledge and a favorable attitude toward plasma donation, respectively. In 109 (28.5 percent) of the participants, plasma donation practice was seen. People with graduate (AOR=5.30, $P<0.05$) and postgraduate level education (7.75, $P<0.05$) were

found to have significantly higher knowledge as compared to people with secondary school as the highest level of education. Plasma donation practice was shown to be strongly related with plasma donation knowledge (AOR=3.78, P0.001) and attitude (AOR=4.48, P0.05).

Conclusion: Despite the fact that the majority of people had a positive outlook and was well-informed, plasma donation was rare. The lower practice was associated with trepidation of contracting a health issue.

Keywords: Attitude, COVID-19, Knowledge, Practice, Plasma.

BACTERIAL CONTAMINATION ON THE WHITE COATS OF DOCTORS AND MEDICAL STUDENTS IN A TERTIARY CARE HOSPITAL, RAWALPINDI

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Introduction : White coats are known to be potential transmitting agents of multi-drug resistant organisms. Wearing white coats by medical professional is accepted practice, but when, where, and how we wear and wash them vary among individuals and even between different institutions. Patients-to-patients transmission of infections within health care facilities has been associated with transient harboring of pathogens in health care workers and students clothing including white coats.

Objective : Bacterial Contamination on the White coats of Doctors and Medical students in a Tertiary Care Hospital, Rawalpindi.

Materials and Methods: A cross sectional study of the bacterial contamination of white coats in a tertiary care hospital. Total 80 White coats are used for this purpose. Medical students, House Officers, Medical Officers/PG'S and Consultants working in various specialties were included in the study. Swabs were taken from 3 different areas of the white coat – cuffs, pockets and from Random sites. White coats were swabbed using wet sterile swab stick. Swabs were wet using Brain Heart Infusion (BHI). The swabs were analyzed using standard Biochemical procedures for bacterial identification after 48hours of Aerobic incubation at 37°C.

Results: Although most of the white coats had been washed Once within a Week. Pockets were the most highly contaminated areas followed by Cuffs and any Random portion respectively. *Klebsiella species* was the major pathogen isolated (22.56%) among Pathogenic category. *Bacillus species* (19.02%) was isolated among nonpathogenic ones. *Staphylococcus aureus* (7.96%) was isolated which is Methicillin Sensitive while only One Methicillin Resistant *Staphylococcus aureus* (MRSA) was isolated.

Conclusion: There is a need to promote scrupulous hand washing before and after attending patients and alternatives to white coats, including universal use of protective gowns, should be considered. Proper maintenance and handling practices need to be taken in order to minimize the degree of bacterial contamination and to prevent cross contamination of healthcare associated infection pathogens in hospital setting.

Keywords: Contamination of White Coats, Nosocomial infections, Methicillin resistant *Staphylococcus aureus*, Health care workers.

ASSESSMENT OF LEVEL OF AWARENESS REGARDING THALASSEMIA MAJOR AMONG PARENTS OF AFFECTED CHILDREN

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Introduction: Thalassemia major is amongst the most common genetic disorders in developing countries like Pakistan.

Objective: To assess the level of knowledge among people related to thalassemia and the number of thalassemia cases linked to consanguineous marriages.

Materials and methods: A cross-sectional study was conducted among parents of 272 thalassemia patients at Rawalpindi thalassemia welfare society, from June 2019 to September 2019. Parents of thalassemia major patients aged 1 to 16 years were included. Parents who were health care professionals, community workers and

with children who had some other genetic disorders along with thalassemia major were excluded. Non-probability consecutive sampling was used. Data was collected using a self-designed questionnaire that assessed prevalence of thalassemia in consanguineous marriages and awareness of thalassemia in parents of affected ones. Data was analyzed using Statistical Package for Social Sciences (SPSS) version 22, by applying descriptive statistics.

Results : 72% parents had consanguineous marriages. None of them had a thalassemia screening test before their marriage. 98.5% of the parents said no awareness campaign had ever been conducted for thalassemia in their area. 50% parents believed that thalassemia had affected their children's interaction with other children of their age.

Conclusion: This study reveals that parents of thalassemia-affected children are not aware of the high link between thalassemia and cousin marriages and the prevalence of premarital testing is almost none.

KEYWORDS: Consanguinity, Beta-thalassemia, Premarital Examination.

KNOWLEDGE, RISK FACTORS AND EFFECT ON LIFESTYLE OF SCABIES PATIENT IN THE RURAL SETTINGS OF GUJRAT

Minahil Ramzan, Abdul Rehman, Abdullah Jamal, Qandeel Zulfiqar, Aiza Khan

Background: Scabies is recognized as neglected tropical disease by WHO. It is a highly contagious parasitic infestation caused by *Sarcoptes scabiei*, prevalent as endemic in developing countries. It is associated with overcrowding, poor hygiene and poverty. In Pakistan scabies prevalence ranges between 18.2% to 70.2% of dermatological case both in rural and urban areas. Scabies affects the families, particularly the most vulnerable. The burden of disease is compounded by its effect on lifestyle.

Methodology and material: We carried out cross sectional study in BHU Noora Mandiala, Gujrat. Target population consisted of all patients with itching coming at BHU OPD. Systematic sampling technique was used to collect data. Semi structured questionnaire translated in Urdu was used to collect data.

Result: Data was collected from 200 respondents, 106 patients (53%) were diagnosed with scabies. Out of these 56(52.3%) were male. About 55.6% scabies patients share their personal belongings as compared to 48.3% non-scabies. Majority (68.8%) scabies patients have more than 5 family members as compared to 35.4% non-scabies. Knowledge about spread and prevention was more (76.4% & 89.2%) in scabies as compared to 18.80% & 65.6% respectively in non -scabies participants.

Conclusion: Lack of knowledge, overcrowding, playing in mud, and sharing of personal belongings were the main risk factors. Effects on lifestyle were seen more in scabies patients but the difference was not statistically significant.

Keywords: Scabies, Knowledge, Itching, Risk factors, Life style

KNOWLEDGE ATTITUDE AND THE ACCEPTANCE OF COVID 19 VACCINE AMONG UNDERGRADUATE STUDENTS OF AIR UNIVERSITY ISLAMABAD.

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INTRODUCTION: The World Health (WHO) declared the COVID-19 outbreak as a **pandemic** on 11 March 2020. Vaccines are the most important public health measure and most effective strategy to protect the population from COVID-19. **Vaccines** were developed in early 2020 afterwards, the process of vaccine trials emerged to determine their safety. With the availability of vaccines underway, it is very important to examine the community **knowledge, attitude and the acceptance** of COVID-19 vaccinations.

OBJECTIVES.

- ☐ To assess the **knowledge** of covid-19 vaccines among the students of Air University Islamabad.
- ☐ To explore **attitudes and acceptance** towards the covid-19 vaccine among students of Air University Islamabad.
- ☐ To determine the **factors** influencing the acceptance of covid-19 vaccine among students of Air University Islamabad

METHODOLOGY: A descriptive cross-sectional study involving 302 participants was carried out among undergraduate students of Air University Islamabad. An online semi-structured questionnaire to assess knowledge, attitude and acceptance towards Covid-19 vaccine was administered through simple random sampling by using student's university Email IDs. Data was entered and analyzed using SPSS version 23.

RESULTS: Overall Knowledge of COVID-19 was reported good, with a mean score 5.11 ± 1.64 . Mostly (79.8%) had positive attitude towards covid 19 vaccine. Factors influencing acceptance included female gender, social media and good knowledge about COVID-19 vaccine. Majority (92%) participants agreed to get a COVID-19 vaccine if doctors recommend.

CONCLUSION: This study concludes that Knowledge about vaccines was overall good and majority had a positive attitude towards covid 19 vaccine. Most of the participants were willing to be vaccinated and agreed to encourage their family and friends to take the vaccine as well.

KEYWORDS: Knowledge, Acceptance; Attitude; COVID-19; Vaccine.

IMPACT OF COVID-19 PANDEMIC ON TEACHING STAFF OF EDUCATIONAL INSTITUTES OF PUNJAB

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Introduction : The COVID-19 pandemic have crippled the entire world. The pandemic had particular effects on the field of education as many institutions across the world had to be closed to avoid the spread. Particularly teachers were the ones who were hit in the worst manner. Pakistan's teaching community has always been financially underprivileged and the condition has been aggravated in the pandemic. The rapidly developing psychological and financial issues among teachers and lack of teachers' training regarding online education need to be addressed in a more detailed manner.

Aims and Objectives: To find out the impact of COVID-19 pandemic on teaching staff of various educational institutions of Punjab.

Methods: A cross-sectional study was conducted and data was collected via sharing the questionnaire with teaching faculty of different institutes of Punjab. Data was analysed through SPSS.

Results: Out of 202 respondents, 50.5% were males and 49.5% teachers were females, 52% were preparing online classes and 68.5% were facing connectivity issues during their class. Almost 80% weren't satisfied with the system of e-learning. 63% teachers experienced mental health issues and 72% teachers noticed study and health related issues among their children.

Conclusion: The corona pandemic had a great impact on teachers. Majority of them were facing mental health issues, financial issues, connectivity issue during the online class and study and health related issues among their children.

A COMPARATIVE STUDY OF ONLINE AND TRADITIONAL (FACE TO FACE) LEARNING

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Introduction: Ever since the advent of usage of the internet as a medium of teaching in the late 1980s, the method of distanced teaching using online methods has been on the rise.

Objectives:

- To assess student's viewpoints about the different ways of learning
- To assess various aspects of online classes when compared with physical classes

Materials and Methods: A cross-sectional, descriptive study was conducted in May-June 2021 in Rawalpindi Medical University in order to analyse the response of students towards the online mode of learning and compare it with traditional learning. The target population was the students of 1st, 2nd, and 3-year MBBS at the Rawalpindi Medical University. Self-structured questionnaires were distributed among a total of 600 students, 200 students from each year. The data collected was analysed using SPSS v 22 and using chi-square test.

Results: 87% (522 out of 600) students responded that traditional learning is more effective as compared to online learning. It was shown that there is no association between year of study and mode of learning also no association between gender and mode of learning. Weak internet connection is the biggest hurdle to online learning.

Discussion and Conclusions: The majority of the participants, acknowledging the positive aspects of online learning; like making management of assignments easier, promoting creativity, easier access to contents and facilitation of giving feedback, still favored traditional, face-to-face learning, for it ensures a better study environment, allows the adequate clinical practice, and improves interaction with the teacher and the fellow students. The biggest hurdles to online learning were connectivity issues, lack of technical expertise, and the need for stricter self-discipline. In short, with the removal of the problems associated with online learning, it can evolve into an efficient mode of learning in the near future.

Key words: Educational technology; Higher education, Online learning, traditional learning, interaction

FUTURE TIME PERSPECTIVE AND FRUSTRATION INTOLERANCE IN MEDICAL STUDENTS

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Introduction: The future perception of students is affected by series of events happening throughout their course of studies. The objective of this study was to measure Future time perspective (FTP) and Future intolerance (FI) among medical students during the COVID-19 lockdown.

Method: It was a descriptive cross-sectional study done from January 15, 2020 to July 20, 2020 among MBBS students of Rawalpindi medical University. The questionnaire comprised of 1) Socio-demographic details, 2) Future Time Perspective scale and 3) Frustration Discomfort scale. An online survey was done using Google Forms. An ANOVA was run to check for differences in FTP and FI between the classes. Bivariate analysis for continuous variable was applied. The data were analyzed using the Statistical Package for Social Sciences (SPSS) v.23.0 (IBM, Armonk, US).

Results: Mean age of participants was 21.8 (SD=1.66). Majority of them were females 331(58.4%). The mean FTP score and mean FI scores were 50.8(SD=19.43) and 91.46(SD=17.65) respectively. Final-year students had highest mean score (Mean=57.94(SD=7.72)) while third-year students scored least (Mean=45.58(SD=6.60)) for FI. On the other hand, mean scores for FDS were highest in first-year students (Mean=102.89(SD=13.52)) while lowest in fourth-year students (Mean=81.73(SD=17.49)) with P=.005. There was significant difference in the dimensions of Emotional Intolerance and achievement among females and males. Bivariate analysis showed a significant negative correlation was found between FTP and the dimension of discomfort intolerance ($r = -0.158$, $p < 0.001$), while a significant positive correlation was found between FTP and the dimension of achievement ($r = 0.225$, $p < 0.001$).

Conclusion: Our study concludes that final-year students have a much higher tolerance level for adversities. Furthermore, they also have a much more positive perspective and a clearer vision regarding their future.

Keywords: Medical students, COVID-19, Future time perspective scale, future discomfort scale, survey

COMPUTER VISION SYNDROME

Sarwat Farooq (4 th year MBBS, Islamic International Medical College)

Objective : To analyze the frequency and complications of Computer Vision Syndrome among medical students.

Method: A descriptive, non-comparative, cross sectional study. 150 medical students were included in this study (120 female and 30 male). After a brief explanation of Computer Vision Syndrome to the medical students, they filled the survey form which included 24 questions of high validity and reliability.

Results: The most significant result in this study was that 85.3 % of medical students used to spend 3 hours or more on daily basis thus they were complaining of one or more symptoms of Computer Vision Syndrome.

Conclusion: This study proved that Computer Vision Syndrome was a common syndrome amongst medical students, often misdiagnosed. The lifestyle and eye health of 85.3% of the target population was affected with CVS manifestations. The most common Computer Vision Syndrome symptoms were headache, pain in neck, shoulder and back, eye strain, blurred vision and fatigue. On basis of this research, we conclude that the future research studies should include both objective and subjective examination tools.

ASSESSMENT OF LEGIBILITY AND COMPLETENESS OF PRESCRIPTIONS AT TERTIARY CARE HOSPITALS: A CROSS-SECTIONAL STUDY

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Rawalpindi Medical University

Introduction: Prescription mistakes such as prescription incompleteness and illegibility account for a large percentage of pharmaceutical errors that might have significant consequences. The objective of this study was to assess the legibility as well as components of a prescription prescribed by doctors in tertiary care hospitals of Rawalpindi.

Methodology: An analytical cross-sectional study was conducted in pharmacies of two allied hospitals of Rawalpindi Medical University. Data were collected in the two weeks of April using stratified randomized sampling. A total of 661 prescriptions were selected and analyzed for legibility by three pharmacists. SPSS version 26.00 and Graph Pad Prism were used to enter and analyze the data. Descriptive statistics, correlational model and multinomial logistic regression were applied.

Results: A total of 1982 drugs were prescribed from 661 prescriptions. About half of the prescriptions (46.0%) were classified in grade 2 and (32.1%) in grade 3. On average, a prescription was found to be 55.74% completed. Generic name was not used in prescribing drugs. On average, prescriber's information, patient's information and medication details were 72.64%, 57.25%, and 36.73% completed respectively. Grade 1 (AOR = 0.62), grade 2 (AOR = 0.83), and grade 3 (AOR = 0.85) prescriptions had less odds of complete prescriptions compared to grade 4 prescriptions. Conversely, grade 1 (AOR = 1.19), grade 2 (AOR = 3.09), and grade 3 (AOR = 1.74) prescriptions were more associated with polypharmacy compared to grade 4 prescriptions.

Conclusion: Majority of the prescriptions prescribed at tertiary care hospitals were incomplete and barely legible.

Keywords: Completeness, handwritten prescription, legibility, medication errors.

ASSESSMENT OF ACADEMIC MOTIVATION LEVELS AND IMPACT OF COVID-19 ON MOTIVATION LEVELS OF UNDERGRADUATE MEDICAL STUDENTS OF RAWALPINDI MEDICAL UNIVERSITY, PAKISTAN

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Rawalpindi Medical University

Introduction: Although motivation is key factor in performance of medical students, little work is done at national level. Covid-19 has affected mental health of students and lockdown has demotivated students.

Objective of this study is to assess academic motivation levels of undergraduate medical students and measure impact of COVID-19 pandemic on students' motivation scores with respect to study years and gender.

Methods: Descriptive Cross-sectional study conducted at Rawalpindi Medical University for 6 months using online questionnaires. Medical students of either gender [1st year-5th year] participated in the study. Students with history of psychiatric illness, anxiety, emotional disorders and academic failure were excluded. Stratified random sampling was used. SPSS version 20 was used for data analysis. Continuous variables were measured as mean and standard deviation and qualitative variables as frequency and percentages. Independent samples t-test was used to measure difference between intrinsic and extrinsic motivation scores across gender. Spearman correlation was used to assess correlation between motivation scores and gender. Amotivation before and after covid was compared using paired t-test.

Results: 384 undergraduate medical students participated in the study. (Females: 72.7%, Males: 27.3%). Mean motivation scores of 24 items of AMS questionnaire were calculated in relation to gender and year of study. Positive correlation was found between motivation scores and gender ($r = .133$, $p = 0.009$, $n = 384$). There is statistically significant difference between intrinsic and extrinsic mean motivation scores of males and females ($p < .001$). Significant difference was found between amotivation scores before and after covid ($p < 0.01$).

Conclusion: Difference of motivation levels of male and female students was highly significant ($p < .001$) and motivation levels dropped significantly during COVID.

KNOWLEDGE OF FIRST AID TREATMENT OF BURNS; A COMPARATIVE STUDY OF PARENTS AND NON-PARENT ADULTS

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Background: Burn First aid Treatment (BFT) is any primary care provided for burn injuries prior to medical aid. Children are the most vulnerable group. In Pakistan 17-18% of childhood burn injuries result in disability due to inadequate first aid. Misconceptions and wrong home practices, like use of toothpastes and burn creams as acute aid for pediatric burns by the adults, especially parents, encumber the health care system despite it being preventable with proper acquisition and application of correct means of treatment. The aim of this study was to assess and compare the knowledge scores of parents of children under 13 and non-parent adults regarding BFT.

Methodology: A cross-sectional descriptive survey was conducted on parents of children under 13 and non-parent adults in twin cities of Pakistan between August 2020 and July 2021. An online structured questionnaire was sent to 364 participants and analyzed using Statistical Package for Social Sciences (SPSS) version 23. Respondents under 18 and with previous workshop attendance were excluded. Mean knowledge score was calculated and compared with other variables using Chi Square Test and Student T Test.

Results: Overall knowledge among both groups remained inadequate (mean score of 4.18 ± 1.94 out of a total score of 14). From a total of 364, 148 (40.7%) confessed to using toothpaste as the best first aid for burns. Cooling the burn was the most favored step immediately after a burn (27.5%). 123 (33.8%) considered running with face covered by a wet towel as the safest way of escaping from a building on fire. There was no significant difference in the knowledge scores of parents (4.20 ± 1.91) and non-parent adults (4.17 ± 1.98) with a p value of 0.841.

Conclusion: In regard to the associated morbidity and mortality of children, the achieved scores for knowledge of Burn First Aid Treatment among both groups were very poor, with no superiority of the parents over non-parent adults. This highlights the need of educating the adults, especially parents. Different health platforms including multimedia, training courses, along with national programs are needed to cater the prevalent misconceptions in our society. This may help in delivering authentic knowledge regarding first aid management of burns.

ACCEPTANCE OF COVID-19 VACCINE: ARE PAKISTANIS 'READY'?

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4th Year MBBS, IIMC Riphah University

Introduction: The COVID-19 pandemic completes more than a year with over 2.0 million-deaths globally. Given the past reluctance towards polio-vaccination, a survey to assess the acceptance rate for the COVID-19 vaccine is imperative.

Objectives: The aim-and-focus of the study were to (i)-Measure COVID-19 vaccine acceptance among community (ii)-Reasons for reluctance towards COVID-19 vaccine (iii)-Challenges that need to be overcome for effective vaccination.

Methods: A cross-sectional online survey distributed during November-December 2020. Questions assessing the acceptance of a vaccine of different effectiveness and source of information for COVID-19 were asked. The sample size was calculated using Open-Epi, and was estimated at 683 (CI: 95%, bound on error of 3% and 50%-acceptability. Comparison of vaccine acceptance among different groups within socio-demographic was assessed by using the Chi-square or Fisher-Exact tests where appropriate. Logistic regression analysis was run to identify factors associated with acceptance rates.

Results: Total 936 responses received which showed 77.0% and 41.0% of participants willing to be vaccinated using a 95%-and-50% effective-vaccine respectively, given a cost and without cost, 85.0% and 56.0% of participants are willing to be vaccinated with the same effective-vaccines. Overall, 45.0% and 39.0% of respondents have trust in the national government and media sources respectively, with a majority (56.0%) considering healthcare professionals-and-hospitals the most reliable source of information.

Conclusion: With the majority having faith in our healthcare professionals-and-hospitals, this sector should be play an active role in promoting vaccination-campaigns while the national-government and media sources should gain public trust as they are crucial in our fight against the pandemic.

Keywords: COVID-19; Vaccine; Acceptance; Knowledge

KNOWLEDGE, ATTITUDE AND PERCEPTION OF PAKISTANIS 'TOWARDS COVID-19; A LARGE CROSS-SECTIONAL SURVEY

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4th Year MBBS, IIMC Riphah University

Introduction : The coronavirus disease has created havoc globally, a study was conducted to evaluate the knowledge, attitude and perceptions regarding COVID-19 as public understanding is vital to help facilitate the control of this outbreak.

Objectives : The aim-and-focus of the study were to (i)-Assess knowledge of COVID-19 among community (ii)-Preventative protocols followed for COVID-19 (iii)-Improve awareness of COVID-19.

Methods: A cross-sectional online survey distributed during 1st-12th June 2020. Descriptive statistics were analyzed using SPSS-v25. Adequate knowledge was assigned as a score of > 4 (range: 0–8) and good perception as a score of > 3 (range: 0–5). Chi-square test was used to determine the significance of difference in knowledge and perception of COVID-19 with socio-demographic characteristics. Logistic regression analysis was run to identify factors associated with adequate knowledge and perception.

Results: Total 1200 responses collected, majority had adequate knowledge (93.3%) with a mean score of 6.59 ± 1.35 , and good perception (85.6%) with a mean score of 4.29 ± 0.82 . Significant differences in knowledge and perception were observed among genders, age groups, education and between students and employees in the healthcare and non-healthcare department. A multivariate analysis revealed a higher educational status and female gender to be significant predictors of adequate knowledge and perception. $P < 0.05$ was considered as significant.

Conclusions : The participants demonstrated an overall adequate knowledge and good perception towards COVID-19. There is a need to follow the preventive protocols and dissemination of correct information through conducting educational interventions.

Keywords: COVID-19; Knowledge; Attitude; Perception

GENERAL AWARENESS AND PRACTICES IN THE PAKISTANI POPULATION REGARDING IMMUNITY

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Introduction : Due to the increasing burden on health system, there is a constant need to improve the general immune status of the population since the immunization coverage is low in Pakistan. This study was conducted to reveal the public perception and efforts regarding the improvement of immunity.

Objectives : The aim-and-focus of the study were to (i)-Identify common practices among public to boost immunity (ii)-Identify changes in knowledge and behaviour to boost immunity after COVID-19 outbreak (iii)-Help identify a safe healthy lifestyle.

Methods: A cross-sectional online survey distributed via social media during December- January 2020. Data collected and analyzed through SPSS v25. Likert scale was implemented in questions to get a better range of understanding. A p-value of 0.05 or less was considered significant.

Results: Approximately 37% participants showed improvement in knowledge and behavior regarding immunity due to COVID-19 and 18% indicated having low immunity due to insufficient knowledge prior to COVID-19. About 32% participants indicated that they only learn about emerging health concerns if they are at risk.

Conclusion: The government needs to conduct health educational campaigns to raise awareness regarding immunity and proper guidelines to create a healthy environment. Also, half of the study participants indicated low immunity due to financial constraints hence the government should provide some support to those who need it.

Keywords: Immunity; COVID-19; Knowledge

KNOWLEDGE AND PRACTICE OF STUDENT NURSES TOWARDS PREVENTION AND MANAGEMENT OF PRESSURE ULCERS IN ALLIED HOSPITALS OF RAWALPINDI MEDICAL UNIVERSITY, A COMPARATIVE STUDY

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Introduction and Objective: Pressure ulcers are very common in hospitalised patients, can be life threatening if ignored or not properly prevented and managed by doctors and paramedical staff. This study was conducted to access student nurse's knowledge and practice towards prevention of pressure ulcers.

Material and Methods: The cross-sectional study was conducted at Nursing Schools of Allied hospitals of Rawalpindi Medical University. A pre-tested self-designed questionnaire was filled by 264 students selected through non-probability convenient sampling technique. Data was analysed using statistical SPSS 21. P value <0.05 was considered to be significant.

Results: Mean scores of Student nurses were 58.7% on knowledge scale and 69.62% on practice scale. Over 21.7% of first year students, 34.1% of second year students and 60.2% of third year students had good knowledge. 10.89% of first year students, 32.9% of second year students and 56.2% of third year students had good practice. There was significant correlation between knowledge and practice (p-value: 0.001).

Conclusion: Knowledge and Practice of Student Nurses towards prevention of pressure ulcer was average and need proper education and training about this. Hence Practice can be improved by improving the knowledge of students.

Key words: Knowledge, Practice, Student Nurses, Prevention, Management, Pressure Ulcers.

PSYCHIATRY

YOUR SUCCESS- A FACT OR A FRAUD? FREQUENCY OF IMPOSTOR PHENOMENON IN HOUSE OFFICERS OF PAKISTAN AND ITS ASSOCIATION WITH SELF ESTEEM

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Introduction: Professionals suffering from imposter phenomenon (IP) are objectively competent but attribute their success to a chance of fate rather than believing in their own potential. The resultant low confidence leads to a mismatch between expectation and performance. **Rationale :** Finding imposter syndrome in house officers can predict those at risk of facing difficulty in future practical and professional lives. Field of medicine depends a lot on decision making, feelings of inadequacy can be a hindrance to professional growth effecting the ability of patient management. **Objective :** To assess self-esteem levels among house officers, To determine frequency of imposter phenomenon among house officers. To determine association between imposter characteristics and self-esteem levels.

Methods: This was a Cross sectional, comparative analytical study. Our study included 93 house officers. Questionnaires having Clance's imposter phenomenon scale and Rosenberg self-esteem scale were used. Correlation between IS and SE was developed using ANOVA with $p < 0.05$ considered statistically significant.

Results: Those who had intense imposter features showed low self esteem score (11 ± 6.5). Applying Pearsons correlation, total IP score was found inversely associated with total SE score ($r = -6.6$, $p < 0.001$) which denotes that imposter characteristics were more prevalent in participants with low self esteem.

Conclusion: House officers with higher imposter characteristics were found to have a lower self esteem, hence boosting up ones self esteem and self image might drastically improve his imposter characteristics

Keywords Self Concept, imposter

PSYCHOLOGICAL IMPACTS OF COVID 19 ON UNIVERSITY STUDENTS / MENTAL DISTRESS AND COVID-19

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Introduction: Coronavirus disease 2019 (COVID-19) is an infectious disease caused by coronavirus 2 that causes severe acute respiratory syndrome (SARS-CoV-2). It was first discovered in Wuhan, China, in December 2019 and has since spread worldwide, resulting in a pandemic. The mental health of students is topic of discussion all over the world. Student's entire performance is determined by his mental health. Students found it difficult to accept a sudden paradigm shift to online learning due to safety measures. Many students were under mental stress in this situation, and it was critical to consider their mental health.

Objective

1. To identify the various psychological issues faced by the students during this pandemic.
2. Exploring the impacts of these issues on students.

Material and method: The research was designed to identify these psychological issues faced by students during the pandemic. The target audience was 30 students from University of Azad Jammu Kashmir and Institute of Business Administration Karachi. They were interviewed where they described impacts of COVID-19 on their mental health. The results were analyzed using atlasti.

Results: Results indicated that COVID-19 has contributed for the following problems in the students

- Emotional pressure
- Financial burden
- Relationship issues
- Mental health problems

- Disturbed sleeping schedule
- Restricted social life

Online classes and financial issues contribute towards a major source of mental pressure moreover having acquaintances infected with COVID 19 was also a risk factor for increasing the mental pressure in students.

Additionally, the study revealed a higher prevalence of mental pressure in masculine gender I.e. male students/participants of the research.

Conclusions : The COVID-19 pandemic has had a significant negative impact on Pakistani university students' mental health. When compared to before pandemic, most common changes in how students felt were increased lack of motivation, anxiety, tension, and isolation. Our findings show that mental health should not be neglected during pandemics.

Keywords: COVID-19, mental health, students

ESTIMATION OF THE PREVALENCE OF ANXIETY RELATED IRRITABLE BOWEL SYNDROME SYMPTOMS AMONG MEDICAL STUDENTS OF RAWALPINDI.

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Objectives : The aim of the study was to find prevalence of Irritable Bowel Syndrome (IBS), compare its prevalence among male and female students and find association of IBS with anxiety among medical students of Rawalpindi.

Materials and methods: A descriptive cross sectional study was conducted among the Medical Students of Army Medical College and Rawalpindi Medical University from March 2021 to May 2021. Structured, self-administered questionnaire was distributed after obtaining consent. Systematic Random Sampling was done. Sample size was 363. Questionnaire consisted of two parts; IBS Questionnaire for healthcare professionals and Generalized Anxiety Disorder Questionnaire. Data analysis was done using SPSS 26.

Results: All the respondents belonged to 15 to 30 age group. 243 responses were collected from females and 120 from males. Analysis of the data revealed that 84 out of 363 respondents (23.1%) had probable IBS. There was a preponderance of females with IBS (26.7%) over males (15.8%). There was significant association of IBS with Gender. Out of 243 females, 37 had severe anxiety, 46 had moderate anxiety, 96 had mild anxiety and 64 had no anxiety. 6 males had severe anxiety, 20 had moderate anxiety, 29 had mild anxiety and 65 had no anxiety. Overall prevalence of severe anxiety was 11.845%. 20.2% individuals with probable IBS had severe anxiety. Data analysis revealed ($p < 0.05$) implying that the association of IBS with anxiety is highly significant

Conclusions : The overall prevalence of Probable IBS was found to be 23.1%. A significant association was found between IBS and gender as well as IBS and anxiety levels. The problem can be addressed by managing the stress levels among medical students.

Keywords: Irritable Bowel Syndrome, anxiety, medical students, healthcare professionals, stress

THE RELATIONSHIP BETWEEN PARENTING STYLES AND SELF-ESTEEM OF MEDICAL STUDENTS WITH AGE AND GENDER AS MODERATOR.

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BACKGROUND: Among various factors that determine an individual's self-esteem, parenting styles play a very significant role in this regard. Certain parenting styles that are practiced around the globe include authoritarian, authoritative and permissive parenting style.

AIMS AND OBJECTIVES: The study aims to investigate the link between parenting styles and self-esteem among medical students, while probing the moderator role played by age and gender in this context.

MATERIALS AND METHODS: A cross-sectional study was conducted among the MBBS students of Rawalpindi Medical University, Rawalpindi from December 2020 to March 2021. 255 students took part in this study. An online survey was prepared by using Parental Authority Questionnaire-Short Version and Rosenberg

Self-Esteem Scale and students were asked to fill it. Simple Random sampling technique was applied. SPSS version 26.0 was used to enter and analyze data. Pearson Correlation, Logistic regression and Hierarchal regression analysis were applied.

RESULTS: Out of 230, 60% of the sample population experienced authoritative parenting style. Authoritative and authoritarian parenting styles were significantly correlated with self-esteem. Females had higher self-esteem than males. Authoritarian parenting style was significantly associated with self-esteem of the participants compared to authoritative parenting style. Females who experienced authoritative parenting and males who experienced authoritarian and permissive parenting styles had more self-esteem compared to their respective counterparts. However, no interaction effect of gender X self-esteem or age X self-esteem was found in relation to parenting styles.

CONCLUSION: Authoritative parenting was found as the most common and only parenting style to have statistically significant positive correlation with self-esteem. This study further highlights the importance of consistent parental supervision and open communication in determining the self-esteem of an individual.

KEY WORDS: Parenting styles, authoritative, authoritarian, permissive, self-esteem

EMOTIONAL IMPACT OF DELAY IN ENTRANCE EXAMINATION ON INTERMEDIATE STUDENTS - ANOTHER HARD STRIKE OF COVID-19

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Introduction: COVID-19 pandemic quickly became a major health issue globally. In order to contain it there was lockdown and consequently shutdown of many educational institutions and delay in examinations. It particularly influenced students' psychological health which we studied in our research.

Objectives : The objectives of this study were to assess the emotional impact of delay of entrance examination on Intermediate Students of Federal Capital and Punjab and find its association with demographic variables.

Materials and Methods:

Students who had registered themselves whether they appeared in entrance examination or not were selected by non-probability convenient sampling. Our online google form included explanation of study objectives, consent of the student, a section on the demographic variables of the students, GAD-7 to assess anxiety, PHQ-9 to assess depression, Burnout Self-Test and Insomnia Severity Index. Descriptive statistics were applied. Chi-square test was applied to compare variables of emotional impact with sociodemographic variables.

Results: Out of 196 participants, 32.1 % were males and 67.1 % were females with a mean age of 18 years. Anxiety, depression, burnout, and insomnia (mild to severe) were present in 69.4 %, 88.3%, 94.4% and 58.7% of the participants respectively. A significant association is established between the students who joined online classes for entrance examination preparation and those at risk of developing burnout (P value=0.039). The prevalence of subthreshold and moderately severe insomnia in female students of intermediate were higher. However, no significant association was found between gender and other emotional impact variables. Also, no significant association was noted between age and emotional impact parameters.

Conclusion:

A very high number of students came out to be suffering from anxiety, depression, insomnia and burnout. Due to the long-lasting pandemic situation and measures such as lockdown and repeated delays in exams, many students are battling with emotional issues. Therefore, it is recommended to take appropriate measures by the Ministry of education and health care providers to resolve this problem.

Keywords: Anxiety, Depression, Insomnia, Burnout.

VOICES OF THE UNHEARD - STIGMATIZATION AND DISCRIMINATION AGAINST THE TRANSGENDER COMMUNITY OF PAKISTAN

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Introduction: Stigmatization and social isolation make transgenders' lives even tougher. Most of the members of this jeopardized minority are forced to indulge into inappropriate ways of earning their livelihood; including beggary and sex work.

Objectives : The objectives of this study were to determine the frequency of transgenders who faced any form of violence and suicidal ideation. Moreover, we aimed to investigate the association between transgender victimization and risky behaviours, like suicidal ideation,

Methods: A cross sectional study conducted over a period of 7 months included a sample of 196 transgenders living in twin cities o. Sampling was done through snowball sampling technique. Unemployed transgenders were excluded. Transgenders of age greater than 18 were included. A combined questionnaire was used to estimate the high-risk behaviours. Data were entered on SPSSv22. Descriptive statistics were applied. Multivariate logistic regression was used to explore the competing outcomes associated with suicidal behaviour and risk, selling sex and substance abuse.

Results: 81.1% (159) of the participants experienced physical violence/victimization while 94.9% (186) faced institutional discrimination. 41.8% (82) of the transgenders were involved in drug abuse while 38.7%(76) in provision of commercial sex services. The prevalence of suicide ideation was comparatively higher, i.e., 39% however, suicide attempted rate was less i.e. 18%. As a result of multivariate logistic regression, being physically attacked increased the odds of both attempting (OR=2.50) suicide and selling sex (OR=4.90) as compared to no-risk.

Conclusion: In Pakistan, the marginalized community of transgenders is continuously subjected to social neglect, isolation and discrimination; making them vulnerable to risky-behaviours as depicted in our study. In addition to these, they experience a high level of physical abuse. All of these amongst the others, compel them to indulge in inappropriate and dangerous conducts to make a living. It is therefore necessary to promote a healthy accepting environment and to reduce gender-based discriminations.

Keywords: Transgender, institutional discrimination, suicide

EXCESSIVE USE OF MOBILE PHONES LEADS TO ANXIETY

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Background: Immoderate use of mobile phones by today's youth has shown a rise in mental health concerns, specifically anxiety. Overindulgence in this luxury has resulted in significant changes in sleep patterns, performances in outdoor activities and other productive pursuits, giving an alarming rise in mental health issues.

Objectives: To assess the anxiety levels in relation with frequency of mobile phone usage among medical students of HITEC-IMS.

Methods: A total of 274 medical students were recruited from all five years using convenience sampling technique at HITEC IMS. Data was collected by pre-formed questionnaire and Beck anxiety score. Data was collected regarding excessive mobile use and anxiety symptoms.

Results: Frequency of mobile phone usage was significantly higher. Becks score for anxiety suggested that students were suffering from mild anxiety (22.3%) to severe anxiety (28.5%). The rates of severe anxiety were greater in females, students residing in hostels and those using their phones for prolonged periods of time. Those using more than 10GB data per month were found to be having highest rates of severe anxiety.

Conclusion: This study suggests that majority students who reported phone usage lying in a higher frequency and duration of use suffered from greater spells of anxiety. Less than one third of students suffered from anxiety. Severe anxiety was more prevalent in students using their phone for longer periods of time.

Keywords: Anxiety, mobile phone usage, immoderate mobile phone usage, excessive, medical students

EMOTIONAL INTELLIGENCE: A CRUCIAL COMPONENT TO MEDICAL EDUCATION

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INTRODUCTION: Hospitals are a place of great stress. It sometimes contributes to violent episodes between the doctors and patients. These can be traced back to lack of emotional intelligence among them. Even though Emotional intelligence nowadays is considered an important trait to have in doctors worldwide. But unfortunately, no efforts are being done to inculcate into the doctors around the world including Pakistan.

Objectives :

1. To analyse various aspects of EQ of students, and their relation with Intelligence Quotient (IQ), gender, and residence and high school education
2. To access the student's viewpoint about the importance of Emotional Intelligence in Medical Education and Its Benefits and Risks

MATERIALS AND METHODS: A cross-sectional study was conducted among the students of 2nd, 3rd, and 4th-year MBBS, in Rawalpindi Medical University. We used Self Structured Questionnaires and the Leadership Tool kit NHS Emotional Intelligence Questionnaire. Chi-square test was applied. Our sample size came out to be 280 according to WHO calculator with 95% confidence interval.

RESULTS: The results showed that there is a significant relation between Intelligence Quotient and Emotional Quotient ($p=0.02$). The results showed that a very little percentage of the medical students obtained adequate scores on the EQ test (32.5%, 39%, and 32% in 2nd, 3rd, and 4th year respectively). The students who got their high school education from government colleges were more emotionally competent than those of private colleges ($p=0.001$). Female students came out to be really good at motivating themselves for difficult tasks ($p=0.02$). Mean EQ score came out to be (171.3)

DISCUSSION AND CONCLUSIONS:

The dismal scores achieved by the students in the EQ test reflect the low level of empathy. There is a dire need to develop emotional maturity in the medical students and clinicians, which calls for its inclusion in curricula.

KEY WORDS: Emotional intelligence, Emotional quotient, Intelligence quotient, Medical education

ASSOCIATION OF COVID 19 PANDEMIC WITH FREQUENCY OF NEW ONSET OBSESSIVE-COMPULSIVE DISORDER (OCD) SYMPTOMOLOGY IN THE MEDICAL STUDENTS

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Background & Objective: Obsessive-Compulsive Disorder (OCD) is an anxiety disorder, which is the sixth-largest contributor to non-fatal health loss globally. Coronavirus disease (COVID-19) pandemic had its effects on mental health besides physical health. This study aimed to explore the frequency of new-onset OCD symptomology in medical students amidst the COVID-19 pandemic.

Methods & Materials: Data for this cross-sectional study were collected in January 2020 during the second COVID-19 wave. Participants with a history of diagnosed psychiatric illness were excluded from the study. The online questionnaire included Yale-Brown Obsessive-Compulsive Scale (Y-BOCS) and Revised Padua Inventory-Contamination Subscale (PI-CS), which were used to assess OCD symptoms and aversion for

contamination respectively.

Results: The study included 711 participants (Males: 29.8%, Mean age: 21.59 ± 1.52 years) from over 46 medical colleges and over 44 cities of Pakistan. The mean pre-pandemic and mid-2nd wave Y-BOCS scores were 11.86 ± 6.02 and 15.61 ± 7.41 respectively. The mean PI-CS score was 17.27 ± 9.17 . Twenty-five percent ($n=176$) of students developed new-onset OCD symptomology during the pandemic, while seventy percent ($n=497$) suffered from worsening Y-BOCS score during the pandemic. New-onset OCD symptomology was associated with younger age ($p=0.02$), higher PI-CS score ($p=0.001$), and studying in preclinical years ($p=0.002$). Worsening of YBOCS score was significantly associated with female gender ($p=0.02$), attending pandemic related awareness seminars ($p=0.027$), studying in preclinical years ($p<0.001$), and being younger than 20 years of age ($p<0.001$).

Discussion: Our findings indicate that the COVID-19 pandemic has led to new-onset OCD symptomology, and has worsened the symptoms of those with pre-existing OCD symptomology. While it is of utmost importance that self-protection, hygienic measures, social distancing, and adequate hand washing be promoted amidst the pandemic, it is equally important to address the mental health impacts the pandemic has had on people. We recommend that mental health awareness, guidance, and counseling should be promoted.

Keywords: COVID-19, Obsessive-Compulsive Disorder, Mental Disorders, Compulsive Behaviour

IMPACT OF LEARNING PORTFOLIO IN STRUCTURING ROUTINE OF MEDICAL STUDENTS DURING COVID-19 LOCKDOWN PERIOD

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Objective: To assess the role of learning portfolio in structuring daily routine of medical students in lockdown period by employing Gibbs model of reflection.

Methodology: This cross sectional study was conducted in CMH Kharian Medical College from July to August, 2020. Data were collected from 2nd year MBBS students. Paper version of the Questionnaire was distributed based on Gibbs model of reflection. Students' responses were recorded based on Likert scale (agree, disagree and neutral).

Results: Out of 100 students, 96 responded. Out of these, 71% students felt motivated by mentor's feedback, 62% were of opinion that reflective writing provided them with a summary that can be used as a rapid revision tool later, 60% felt that learning portfolio helped to structure their working days better. Learning portfolio helped 58.56% students to track learning progress against defined learning objectives and 55.68% were of opinion that this learning assessment modality can be continued for other sessions. We found that 51.84% students agreed that keeping the learning portfolio updated fostered reflective thinking process.

Conclusion: Incorporation of learning portfolios in early years of medical education can work as efficient reflective tools that facilitate the learner to structure daily working routine systematically. With feedback, this learning modality motivates the learner in a better way by identifying their shortcomings at an earlier stage.

Key words: Learning portfolio, self-reflection, knowledge gaps.

AUGMENTATION OF CONVENTIONAL MEDICINE FOR POST-CONCUSSION SYNDROME WITH COGNITIVE BEHAVIORAL THERAPY ACCELERATES SYMPTOMATIC RELIEF IN AFFECTED INDIVIDUALS

Darakhshaan Samar, Syed Asad Gillani, Anser Ikram Rishi, Shehreen Sohail

Objective: Post-concussion syndrome (PCS) is a clinical term used to point out the complicated combination of physical, emotional, cognitive and behavioral signs and symptoms associated with Mild Traumatic Brain Injury (mTBI). This study was conducted to assess the improvement or debilitating effect of behavioral therapy in addition to the conventional treatment and to document these results for increasing the efficiency of treatment provided to such patients.

Method: This study was primarily an interventional prospective cohort which was conducted in the department of neurosurgery, Mayo Hospital Lahore. Sample size was set at 200 patients which were randomly distributed into 2 groups. Interventional group with Cognitive behavioral therapy added in addition to conventional treatment regimen and the Control group receiving only conventional treatment. Results were noted initially as well as after two weeks of follow up period. Data was analysed using Statistical Package for Social Sciences (SPSS)

Result and conclusion: Among the patients that were given therapy sessions along with conventional medicine, there was significant improvement in the symptoms and their overall quality of life. It is also important to notice that the time period taken for these effects to wane was cut down by psychiatric solutions too. So we can conclude that CBT sessions not only speed up recovery in patients of post concussion syndrome, they also aid in efficient improvement in functional capability and quality of life.

Keywords: Post concussion syndrome, Cognitive behavioral therapy, psychiatric therapy

COVID-19 VACCINE HESITANCY AMONG HEALTH CARE PROFESSIONALS OF ALLIED HOSPITALS OF RAWALPINDI MEDICAL UNIVERSITY: A MEDIATION ANALYSIS

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Background: A healthy healthcare system requires healthy healthcare workers. Protecting healthcare workers against COVID-19 is crucial, and vaccination could be a viable future option. However, vaccine hesitancy remains a global challenge.

Aims and objectives: This study estimated healthcare workers' influenza vaccination behaviors and intention to receive COVID-19 vaccine when available, and examined their corresponding 7C psychological antecedents (confidence, complacency, constraints, calculation, and collective responsibility, compliance and conspiracy). To investigate the impact of COVID-19-related stress factors, the mediation effects of psychological stress on the association between stress factors and COVID-19 vaccination intention were also examined.

Methods and Materials: An observation cross-sectional survey was conducted among health care professionals including nurses and doctors of tertiary care hospitals of Rawalpindi. Data was collected from February to April 2021. A total of 624 health care professionals voluntarily participated in our research. Demographic Details, questions like pneumonia vaccination, hepatitis vaccination, influenza vaccination and 5C+ questions were asked.

Results: Influenza vaccine, hepatitis vaccine and pneumonia vaccine uptake rate and the proportion of getting COVID-19 vaccination were 43.4%, 65.2%, 42.8% and 39.7%. Hepatitis vaccination was significantly associated with the 7C model, and patient contact frequency whereas influenza vaccination was significantly associated with conspiracy and occupation. COVID-19 vaccine intention was significantly associated with female gender, more confidence, married life, doctor profession, negative constraints and complacency.

Conclusion : The potential uptake rate of COVID-19 vaccine among healthcare professionals was suboptimal to achieve herd immunity. The 7C constructs were useful in predicting influenza vaccination and, to a lesser extent, the intention to take COVID-19 vaccine.

EVALUATION OF SLEEP QUALITY AMONG MEDICAL STUDENTS AT HITEC-IMS

Talha Naveed, 4th Year MBBS, HITEC-IMS

Background: Sleep is a natural phenomenon experienced by every individual. It is one of the essential part of life and in order to stay in ones best health good sleep is very important. Lifestyle changes and other environmental and non-environmental changes have led to poor sleep among many, which also include medical students. Due to the COVID pandemic study was switched from physical classes to online classes which also altered the sleep cycle of many students. This study intents on assessing sleep quality among medical students, comparing their sleep cycles during physical and online studies along with other factors associated with sleep patterns.

Methods: A Cross-sectional Questionnaire based survey was conducted among MBBS and BDS students of HITEC-IMS. A total of 147 students were surveyed in a time period of 1 month. Data was collected on Google forms and analyzed using Statistical package for Social Sciences (SPSS). The questionnaire included PSQI Pittsburgh Sleep Quality Index and other clinically validated questions. Students with known sleeping disorders were excluded from this survey.

Results: Of 147 students, 94(63.9%) were classified as “Poor Sleepers” and only 53(36.1%) were “Good Sleepers”. Poor sleep quality was associated with female gender ($p<0.05$), day-scholar residence status ($p<0.054$), excessive time required to sleep ($p<0.00$), excessive screen time usage ($p<0.007$), increased hours of study ($p<0.089$), experiencing trouble while driving, eating and socializing ($p<0.002$), lack of enthusiasm ($p<0.000$), unsatisfactory daily activities ($p<0.000$) and poor daytime alertness levels ($p<0.360$). 104 (70.7%) were aware of the effects of melatonin on sleep, only 51 (34.7%) admitted to have used coffee to stay awake at night. 98 (66.7%) subjects were pre-exam workers, 95 (64.6%) admitted not being able to wake up easily in the morning.

Conclusion: Majority students were devoid of good sleep and hostelites who used less screen time slept better. Excessive daytime tiredness was also a result of poor sleeping habits. Students who studied for longer periods of time and had difficulty waking up in the morning slept poorly. Poor sleepers also find it difficult to interact and are often unambitious about performing their daily menial tasks, as well as displeased with their daily activities.

Keywords: Sleep Quality, Medical Student, Online Classes, PSQI, Excessive Daytime sleepiness, Epworth sleepiness scale.

RELATIONSHIP BETWEEN KNOWLEDGE ON COVID-19 AND PSYCHOLOGICAL DISTRESS AMONG STUDENTS LIVING IN QUARANTINE: AN EMAIL SURVEY

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Background: Psychological distress is a generic term which refers to “feeling of emotional strain” that affects our normal mental and physical functioning.

Aims and objectives: The aim of this study is to investigate the psychological distress perceived by the Pakistani students living in quarantine and to determine risk and protective factors, including knowledge of COVID-19, among this population.

Methods and Materials: It is a descriptive cross-sectional study conducted from February to May 2020. Students enrolled at different colleges and universities of Pakistan participated in this survey. One-way analysis of variance (ANOVA) is computed for comparing knowledge scores of participants having different levels of psychological distress.

Results: A total of 937 participants completed the survey questionnaire, with slightly more male respondents (60.6%) than female (39.4%). The average age of survey participants is 22.0 years (SD = 3.01), with majority (76.2%) belonging to urban areas. The mean COVID-19 knowledge score is 8.91 (SD = 1.69, range: 1–12), suggesting an overall 74.25% precision rate for this knowledge test for individual participant. The participants scored least knowledge regarding the disease transmission, showing a percentage correctness of only 40%. Majority of the participants (57.3%) are likely to be well, while others (42.7%) have shown symptoms of mental distress. The analysis reveals that participants with moderate mental distress (M = 8.81, SD = 2.37) and those with severe mental distress (M = 8.75, SD = 2.69) scored lower than participants who were likely to be well (M = 9.49, SD = 1.71).

Conclusion: Our study concludes that a higher knowledge base regarding the disease will help to mitigate distress levels. Our study suggests that in order to deal with this pandemic effectively, the knowledge regarding COVID-19 should be properly conveyed to general public. It is need of the hour to address mental issues of the population aggressively along with providing awareness about COVID-19.

Keywords: psychological distress; the Kessler-10 (K10); COVID-19; quarantine

PERSONALITY DYNAMISM AND ACADEMIC PERFORMANCE AMONG BOARDERS AND NON BOARDERS STUDYING IN A MEDICAL UNIVERSITY

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Introduction: The personality of a human being consists of his behavior, cognition, emotional abilities, and interaction with his surroundings. The personality of an individual is modified by his ability for social perception, life experiences, and training. The pattern of study in which a person acquires education has a great influence on their personality.

Aims and Objectives: To compare the personality traits and academic performance of boarders and non-boarders studying in a medical university.

Material and methods:

It is a comparative, descriptive cross-sectional study done at Rawalpindi Medical University, Pakistan. The duration of the study was from January 2019 to April 2019. A questionnaire was randomly distributed among the students of Rawalpindi Medical University and filled under supervision. The questionnaire had two parts: (1) Academic performance information and (2)

Big Five inventory (BFI-40). Only MBBS students of Rawalpindi Medical University were included. For statistical analysis, the independent t-test was applied using the Windows IBM Statistical Package for the Social Sciences Version 22 (SPSS, IBM Corp., Armonk, NY, US). The statistically significant value was taken as 0.05.

Results: Out of 300 questionnaires distributed, 287 were properly filled, giving a response rate of 95.6%.

The Cronbach's alpha value was .750. The mean age was 20.87±1.344. There were 216 (75.1%) male and 71 (24.9%) females. One-hundred eighty-three (63.8%) were boarders and 104 (36.2%) were non-boarders. The mean scores of extraversion, agreeableness, and conscientiousness were higher for boarders while the mean scores of neuroticism and openness were higher for non-boarders. High average percentages in professional exams were common in non-boarders while boarders were taking more supplementary exams comparatively.

Conclusion: Self-discipline, surgency from external activities/situations, and getting along with others are common traits among boarders. On the other hand, non-boarders are more creative but emotionally unstable. The academic status of boarders is comparatively poor. Thus, the hostel administration should be particularly concerned about the activities of boarders, and parents should be aware of their child's academic status. Teachers should pay special attention to the character development of students.

Keywords: big five inventory, boarders, non-boarders, extraversion, agreeableness, conscientiousness, neuroticism, openness

A COMPARATIVE STUDY OF ONLINE AND TRADITIONAL (FACE TO FACE) LEARNING

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Introduction: Ever since the advent of usage of the internet as a medium of teaching in the late 1980s, the method of distanced teaching using online methods has been on the rise

Objectives:

- ☐ To assess student's viewpoints about the different ways of learning
- ☐ To assess various aspects of online classes when compared with physical classes

Materials and Methods: A cross-sectional, descriptive study was conducted in May-June 2021 in Rawalpindi Medical university in order to analyse the response of students towards the online mode of learning and compare it with traditional learning. The target population was the students of 1st, 2nd, and 3-year MBBS at the Rawalpindi Medical University. Self-structured questionnaires were distributed among a total of 600 students, 200 students from each year. The data collected was analysed using SPSS v 22 and using chi-square test.

Results: 87% (522 out of 600) students responded that traditional learning is more effective as compared to online learning. It was shown that there is no association between year of study and mode of learning also no association between gender and mode of learning. Weak internet connection is the biggest hurdle to online learning.

Discussion and Conclusions: The majority of the participants, acknowledging the positive aspects of online learning; like making management of assignments easier, promoting creativity, easier access to contents and facilitation of giving feedback, still favored traditional, face-to-face learning, for it ensures a better study environment, allows the adequate clinical practice, and improves interaction with the teacher and the fellow students. The biggest hurdles to online learning were connectivity issues, lack of technical expertise, and the need for stricter self-discipline. In short, with the removal of the problems associated with online learning, it can evolve into an efficient mode of learning in the near future.

Key words: Educational technology; Higher education, Online learning, traditional learning, interaction

ASSESSMENT OF FREQUENCY OF ATTENTION DEFICIT HYPERACTIVITY DISORDER SYMPTOMS IN MEDICAL STUDENTS AND ITS ASSOCIATION WITH SLEEP PATTERN, SCREEN TIME AND PHYSICAL ACTIVITY

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Introduction : ADHD is amongst common chronic neuro developmental disorder which is characterized primarily by impulsivity, hyperactivity and inattention. The mean prevalence of pediatric mental problems in Pakistan is estimated to be 15.8% with ADHD being the most common diagnosis. Growing evidence suggests that individuals with probable ADHD show more involvement in sedentary life style. Similarly, screen time has also been reported to have significant association with ADHD symptoms. Sleep disturbances act as an independent risk factor for ADHD or they may appear as a symptom.

Objective : To study the prevalence of ADHD symptoms in medical students and to investigate the association of ADHD symptoms in medical students with their physical activity, screen time and sleep deprivation. **Study**

Design: Cross sectional descriptive study. **Place and Duration Of study:** This study was carried out among first and second year medical students of Rawalpindi Medical University, Rawalpindi in June, 2019. Study duration was two months. **Materials and methods:** Data was collected using a self-administered questionnaire derived from literature. Sleep deprivation was assessed using Epworth Sleepiness Scale, ADHD symptoms were assessed using Adult ADHD Self Report Scale Symptom Checklist. Significance value was set at $p < 0.05$. The questionnaires were distributed among three hundred medical students. Data was analyzed using SPSS version 23, statistical relations were established using chi square test.

Result: 33 respondents were labelled as ADHD suspects. The relation between physical activity and ADHD symptom turned out to be significant ($p = 0.045$). Total screen time and ADHD did not show a significant relation ($p = 0.266$). However, laptop usage hours per day ($p = 0.04$) and phone usage hours per day ($p = 0.007$) were significantly related to ADHD symptoms.

Conclusion: Factors having the capacity to aggravate ADHD symptoms intensity ought to be regulated. Cutting down the screen time of the suspects, increasing their time of physical activity and ensuring appropriate sleep patterns can aid in alleviating ADHD symptoms.

BUDDING MEDICAL PROFESSIONALS AND COVID-19: THE IMPACT OF COVID-19 ON MENTAL HEALTH AND MEDICAL STUDENTS

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Introduction: Due to the COVID-19 pandemic, educational institutions were closed down and transitioned to online-teaching platforms which raised several obstacles for faculty members and students. This cross-sectional study will analyze the impact of COVID-19 outbreak on the education and mental health of medical professional students across Pakistan.

Objectives : The aim-and-focus of the study were to evaluate (i)-Perceptive regarding online education (E-teaching) (ii)-Psychological impact of COVID-19 (iii)-Challenges encountered by the students during the pandemic.

Methods: The online cross-sectional survey was conducted from July-2020 to Aug-2020 and data analyzed through SPSS version-25. Sample-size was estimated using software Epi-Info and assuming that 50% of the population has been affected by online-education with a 95% confidence level and a bound-on error of $\pm 5\%$. The sample size was further increased by 6% to account for non-responders to a final sample size of 400 participants. Univariate-and-multivariate analyses was conducted to compare COVID-19 related anxiety and depression with each variable of interest.

Results: About 59.8%-h=259 students were not satisfied with the online-education platform which could be explained due to participants unable to properly communicate with the teaching instructor as 59.6%-h=258 students reported this. Presence of mild-moderate depression was observed among 44.34%-h=192 students with males less likely to be depressed as compared to females based on univariate analyses.

Conclusion: Improvements need to be made by institutions to ensure medical professional students get a thorough understanding of theory and clinical exposure through the online platform. The institutions should conduct seminars regarding mental health to help students cope with stress and depression.

Key Words: COVID-19; Education; Mental Health

SCREENING FOR DEPRESSION IN DIABETIC PATIENTS

AIMS AND OBJECTIVE

The objective of this study was to examine the strength and consistency of the relationship between depression and diabetes complications in studies of type 1 and type 2 adults patients with diabetes.

METHODS: We work on the our hypothesis stated that prevalence of depression or depression associated characters are found more in diabetic patients than in normal patients. We use the questionnaire (non experimental) method. *Through* the qualitatively digital questionnaire developed by using questions from the BACK DEPRESSION INVENTORY or some different close ended questions. Studies were reviewed for diabetes type, sample size, statistical tests and measure of diabetes complications and depression. Calculated for the overall Sample(K=30) and for subsets of interest.

RESULT: Our research hypothesis has been accepted. In order to test our prevalence study, we choose ANOVA statistical tool for our analysis so we find that our p value less than 0.05% significance level which indicates that statistically we accept hypothesis that there is no relation of depression to diabetes. But hypothesis in term of diabetes has become accepted but related of depression has not been accepted. According to our hypothesis depression is greater in diabetic patient is fail and we obtain data from survey indicates that prevalence of depression is not related only to diabetes, there are many other factor which influenced our result. Regarding patient's medical characteristic, the majority of patients were having Type II diabetes 70.6 % as compared to Type I diabetes 29.4 %. Most of them were using oral diabetes medications instead of insulin. Patient screened positive for depression (PHQ -2) 16.5%by our group composed almost half of the total sample (32.35%).The PHQ-2 positive result was statistically significantly associated with Female gender were more depressed than male gender ,suffer from diabetes, use of medications.

CONCLUSION: Participants with high level or moderate level depression more likely to have several factors. Such as poor diet, medication adherence, Age, weight. Although all diabetic patients are at risk of having depression, female gender, long standing diabetes, insulin use and having medical comorbidities are at higher risk.

KEY WORDS: Diabetes, Depression, Screening

PREVALENCE AND GENDER DIFFERENCES OF BODY DYSMORPHIC DISORDER (BDD) IN MEDICAL STUDENTS OF PAKISTAN: A PILOT STUDY

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Introduction : Body dysmorphic disorder (BDD) consists of a preoccupation with an 'imagined 'defect in appearance which causes significant distress or impairment in functioning. BDD can lead to social isolation, occupational dysfunction, unnecessary cosmetic surgery, and suicide, the most common being depression. These individuals have their thoughts fixated on the perceived defect. Their symptomatology ranges widely from repetitive mirror checking or avoidance of mirrors, masking the affected area, and asking for medical help especially from plastic surgeons.

Objective: To find out the prevalence of Body Dysmorphic Disorder among medical students over a 1-month time scale using survey form

Research Methodology: This cross sectional observational survey was conducted among medical students all over Pakistan. Questionnaire was filled through non probability convenience sampling which assessed clinical features of BDD. Absolute confidentiality was maintained. Students with anorexia nervosa, bulimia and hypochondriasis were excluded. Statistical analysis carried out using Spss version 25.

Results: A total of 126 response forms were received out of which 97.7 percent (123 students) met the inclusion criteria. A total of 71.6% (88 students) reported some degree of dissatisfaction with some aspect pertinent to their body image. The main areas of concern for female students were increased body weight (28%), hair texture and volume (14.3%), skin (23%) and those for males mainly included acne (15%), decreased muscle mass (12.7%), thin hair (9.3%) and. Females were more concerned about being fat whereas males were concerned about being thin.

Conclusions: Body dysmorphic disorder is not an uncommon disorder which has imparted significant clinical distress in making the student population of our country highly susceptible to social anxiety disorders with body foci of concern more in females. We' have also seen media playing its notorious role in reflecting an ideally perceived body image that needs scrutiny.

Keywords: Body Dysmorphic Disorder, Anorexia nervosa, Bulimia nervosa