

# 15<sup>TH</sup> UNDERGRADUATE MEDICAL RESEARCH CONFERENCE



## ABSTRACT BOOK

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KEEPING THE RESEARCH CULTURE ALIVE

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18th - 19th MAY, 2022



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Undergraduate Medical  
Research Department PMC



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## MESSAGE FROM THE DEAN

It is quite gratifying to note that our college's department of Undergraduate Medical Research is hosting its 15th Conference in May 2022. Organizing such an event at this point reinforces our objective of developing an environment for the exchange of ideas towards addressing health problems through research. I wish the conference would be able to deliberate on current issues of national and international relevance, particularly in the field of medical and biological sciences. There has been an unprecedented number of quality researches that are to be presented at the conference. I am sure that this occasion will provide an affable environment for researchers and academicians to freely exchange views and ideas with others. As one of Pakistan's medical colleges, the main challenge is to remain competitive and relevant by offering high-quality technical academic training and research activities, focusing on its niche areas. New knowledge and findings cannot be generated without any research and development activities.

On behalf of Prime Foundation, I would like to express my appreciation to all committee members of UMR Society 2022 from the Faculty of Medical and dental sciences and students, for their hard work and relentless effort. Without their commitment and contributions, this event would not be possible and successfully delivered at this time. I convey my warm greetings and felicitations to the organizers of the Prime UMR Society and the distinguished participants from all over the country and extend my best wishes for the success of the conference.

May Allah bless us all!

**Prof. Dr. Hafeez Ur Rahman**

Dean Health Sciences

## MESSAGE FROM THE DIRECTOR

It is with gladness that I present this introduction to the Book of Abstracts, as Director Undergraduate medical research department hosting this Conference. This Conference aims to bring together young undergraduate researchers involved in public health, medical education, and basic and clinical sciences including research scientists, clinicians, and other experts so that they will have a forum to share their research results and methods. The Book of Abstracts portrays the synopsis of the papers of these bright young contributors to the Conference. The world of research is an exciting area and we'll continue to meet and bring inspired people together in forums like this, to ensure our institute remains at the cutting edge.

Building on the success of previous conferences, the theme for 2022 is "keeping the research culture alive", and I look forward to this event that will provide the young researchers the opportunity to learn the latest results from their peers, and academic scientists on the topics presented, and the training delivered.

I must say, it has been a great opportunity and an honor, to work together with enthusiastic, passionate, and brilliant students since January 2022. These young researchers and organizers inspire and prove that this generation has so much to offer to create a bright future for our nation. Each of them has an exceptional talent and an outstanding endeavor. So, I specifically thank them - the UMR society students - who have been the backbone of the event, managing and organizing the event for months.

I am also thankful to the administration in general for rendering us with all possible logistic support towards organizing this event; and all the speakers and delegates for their enthusiastic participation.

Finally, I thank the conference committee for extending their valuable time organizing the program and all the authors, reviewers, and other contributors for their sparkling efforts and belief in excellence.

May Allah bless us all!

**Dr. Hala Rajab**

Director, Undergraduate Medical Research

## **MESSAGE FROM THE PRESIDENT OF UMR SOCIETY**

The sparkle of fire is the witness of your worth, and the silent frounce of the water is the witness of your softness. The rising of the sun in the east and the sunset in the west is the witness of your rhythm, and the rhythmical movement of the moon is the witness of your perfection. In my words, my soul is the witness of the oneness of glory Allah whose glorification cannot be described in words.

I would like to extend my warmest felicitations to the organizers and participants on the occasion of the 15<sup>th</sup> Undergraduate Medical Research Conference. Special thanks to the Director of UMR and my teachers who guided me at every moment and made this conference successful.

This conference aims to provide a platform for young researchers to enhance their research skills, present research studies, instill critical thinking, and develop leadership skills and along with this, it gives an experience of organizing a conference.

Besides, UMR also provides a platform where one can exercise co-curricular activities while serving curricular purposes. For me, it's an event by the students for the students.

As health care workers it's our responsibility to keep ourselves updated with knowledge of diseases and their modern treatments which only comes through critical thinking and research work because, at the end of the day, we are serving humanity.

Finally, I will thank Almighty Allah for blessing me much more than I deserve.

**Mr. Adnan Shahzad**

President,

15<sup>th</sup> Undergraduate Medical Research Society





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**BASIC AND  
CLINICAL  
SCIENCES**



# **NEXT GENERATION SEQUENCING OF OCULOCUTANEOUS ALBINISM IN CONSANGUINEOUS FAMILIES FOLLOWED BY MOLECULAR DOCKING AND MOLECULAR DYNAMICS SIMULATION TO INVESTIGATE L- TYROSINE BINDING**

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## **INTRODUCTION:**

An autosomal genetic disorder known as Oculocutaneous albinism (OCA) is caused by a tyrosinase gene (TYR) mutation in both heterozygote and homozygote forms. Its most popular form is OCA1. Around the world, 1 out of 20,000 live births are affected by albinism and its frequency varies among different racial backgrounds. Autosomal recessive inherited disorders are more common in Pakistan, because of cousins' marriages.

## **OBJECTIVE(S):**

1. To evaluate the genetic basis of OCA in two Pakistani families from the Charsadda district, as well as its molecular dynamic simulation and molecular docking in conjunction with L-Tyrosine.

## **METHODOLOGY:**

From every member of the family, Blood samples were taken. Next generation and Sanger sequencing were done on the extracted DNA.

## **RESULTS:**

In all affected individuals, a missense novel mutation in the TYR gene at (c.1255G>A) in exon 4 was found. Splicing errors in the TYR gene (deletion of sequence) were detected in Group-2 individuals. To confirm the mutations, Sanger sequencing was used. Following the sequencing results, the mutations were inveterate. Polyphon-2 software was used to determine the infectious effect of a mutation, and it was discovered that the known mutation is most likely causing protein damage. The structures of mutant and natural proteins were studied, and it was revealed that exchanged the glycine for arginine, initiating the protein's function and structure to be negotiated. Furthermore, molecular docking was used to develop drugs for the mutant and wild proteins of the TYR gene.

## **CONCLUSION:**

It is concluded that a powerful medication for this illness is expected to alleviate the mutant protein and convert it back to its normal function. This will go into a new zone of genetic disease therapy.

## **KEYWORDS:**

Docking, protein structure, mutation, next generation sequencing, albinism.

# **TACKLING ANTI-MICROBIAL RESISTANCE VIA CRISPR-CAS “A HIGHLIGHT”**

**Zaryab Khan, Abdul Aziz, Umar Aziz, Shahid Wahab, Syed Asim Billah.**

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## **INTRODUCTION:**

Antimicrobial resistance is a problem that has sharply increased in the 21<sup>st</sup> century due to the overuse and misuse of antibiotics. The present study represents the development of a technique to overcome the issue of antimicrobial resistance by taking two bacterial species: Mycobacterium Tuberculosis and Enterococcus Faecalis. These species are resistant to antimicrobial agents and conducted study shows the decrease in their antimicrobial resistance.

## **OBJECTIVE(S):**

1. To tackle the antimicrobial-resistant microbial strains via CRISPR/Cas System.
2. To evaluate and develop a non-conventional efficient procedural method for eliminating the resistant gene from a microbial colony on a pilot scale.

## **METHODOLOGY:**

An experiment was performed at Genomics & Proteomics Lab, Department of Biotechnology, the University of Malakand, collaborating with Dr. Zahir Ali, KAUST, Saudi Arabia. Isolation of vectors was done through centrifugation from the filter paper discs. Test and experimental bacterial colonies were cultured on plates. Gene transformation was done by electroporation on bacterial colonies and then incubation. Screening of transformants was performed by a further subculture of transformed bacterial colonies and screening using antibiotics earlier they were resistant to (Rifampin, Ethambutol, Pyrazinamide, Vancomycin)

## **RESULTS:**

Multidrug resistance in MDR-TB decreased by 73.26% while antibiotic resistance in VMR Enterococcus Faecalis showed a decrease of 78.71%.

## **CONCLUSION:**

The MDR gene from the Mycobacterium Tuberculosis and VMR gene from Enterococcus Faecalis resistance showed lower resistance to respective antibiotics through CRISPR/Cas.

## **KEYWORDS:**

CRISPR/Cas, Genome Editing, Antimicrobial Resistance, MDR-TB, VMR

# PREVALENCE OF MULTIDRUG-RESISTANCE OF ESCHERICHIA COLI IN URINARY TRACT INFECTION PATIENTS VISITING REHMAN MEDICAL HOSPITAL, PESHAWAR, PAKISTAN

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University of Peshawar, Peshawar

## INTRODUCTION:

Urinary tract infections represent a major public health problem. *Escherichia coli*; commensally inhabitant of the gastrointestinal tract, are the primary cause of UTI. Over the years, *Escherichia coli* like any other Enterobacteriaceae member has become resistant with an increased rate to antibiotics.

## OBJECTIVE(S):

1. To find out the prevalence of multi-drug resistance *E. coli* in urinary tract infection patients visit Rehman medical hospital, tertiary care hospital in Peshawar, Pakistan.

## METHODOLOGY:

A total of 800 urine samples were collected from patients of all genders and ages for 6 months whither 150 samples were positive for UTI. CLED Agar media was used to observe bacterial growth in urine samples followed by the biochemical test API10. The samples which showed bacterial growth were then subjected to MHA media to detect the sensitivity/susceptibility of antibiotics using an antibiotic disc.

## RESULTS:

100 out of 150 samples were positive for MDR and 50 samples were non-MDR. Among agents tested Fosfomycin (15.3%), Amikacin (16 %), and Tazobactam (18.7%) showed the lowest resistance, and Amoxicillin /clavulanic acid (74.7%), Cefepime (70 %) and Levofloxacin (62.7%) showed the highest resistance. Among the other tested agents in the current study cotrimaxlole showed 47.3%, Salbactam 24.7%, Cefepime 70 %, Ampicillin 54%, ceftriaxone 43.3 % Fosfomycin 15.3 %, and Norfloxacin 54 % resistance respectively.

## CONCLUSIONS:

Prevalence of MDR to the antibiotics that were not resistant to *E. Coli* a decade ago was found to be emerging gradually into an alarming situation which is most likely due to the excessive usage, partial medication, and self-medication along with the other factors.

## KEYWORDS:

MDR (Multi-Drug Resistance), CLED (Cysteine Lactose Electrolyte Deficient), MHA (Mueller Hinton Agar), API (Analytical Profile Index).

# **CORRELATION OF GLYCOSYLATION OF HEMOGLOBIN AMONG INSULIN-DEPENDENT AND NON-INSULIN-DEPENDENT INDIVIDUALS IN RAWALPINDI & ISLAMABAD**

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International Islamic University, Islamabad

## **INTRODUCTION:**

The hemoglobin (Hb) has an affinity toward many biomolecules, including glucose. In hyperglycemia, sugar binds with Hb and this glycosylated Hb (HbA1c) can diagnose the glucose metabolism in the body.

## **OBJECTIVE(S):**

- 1 To evaluate the effects of patients' diet and insulin treatment on the glycosylated hemoglobin (HbA1c) levels among insulin-dependent and non-insulin-dependent diabetic patients.

## **METHODOLOGY:**

In this study medical history of diabetes, diet plan, and dosage of insulin of 74 subjects (24 insulin-dependent and 50 non-insulin-dependent) were recorded. The value of serum blood glucose level and HbA1c were determined by Roche D10 and Abbot Architect module 4000.

## **RESULTS:**

In both insulin-dependent and non-insulin-dependent subjects, the glycosylation rate depends directly on the serum glucose level, i.e., high glycosylation with high serum glucose levels and vice versa. In insulin-dependent subjects, hyperglycemia was more common in females compared to male subjects, which might be due to the prolonged use of Humulin. Moreover, despite Humulin use, serum glycemia levels were not properly metabolized. Therefore, Humulin just regulates the levels of serum sugar levels but is not good for glycemic control. In non-insulin dependents, serum sugar metabolism depends on dietary sugar intake. The old-age non-insulin-dependent subjects had high blood glucose levels and high glycosylation rate whereas young age subjects normally had low or normal serum sugar levels, resulting in a normal glycosylation rate and does not depend on gender factors.

## **CONCLUSION:**

HbA1c levels could help in controlling hyperglycemia condition, dietary intake of sugar, improving metabolic control, and suggesting other potential alternative paths of treatment.

## **KEYWORDS:**

Blood glucose, Hyperglycemia, Insulin, Diabetes.



# **USE OF OUT-OF-HOURS EMERGENCY DENTAL SERVICE AT TWO PUBLIC SECTOR HOSPITALS OF PESHAWAR**

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## **INTRODUCTION:**

Having access to emergency dental care is one of the fundamental rights of every citizen. Severe pain, heavy bleeding, and injuries to the face, mouth, or teeth are common dental emergencies that need immediate attention that is not covered in medical hospitals outside of working hours.

## **OBJECTIVE(S):**

1. The reasons for the Out-Of-Hours visit of the patient to the emergency dental department.

## **METHODOLOGY:**

A cross-sectional prospective study was conducted and patients referred from OPD fulfilling the inclusion criteria were invited to participate in the study. Data was collected through a questionnaire over a period of one month.

## **RESULTS:**

Among 200 patients, 142 (71%) were female and 58 (29%) were male. Most of the patients were in the age range of 45 to 60 (58%), having the chief complaint of pain in lower and upper posterior teeth. The majority of patients were found to be medicated (96.5%) and the rest were refused any treatment at all (4.5%)

## **CONCLUSION:**

Most patients were simply medicated if they came in with a dental emergency out of working hours.

## **KEYWORD:**

Dental emergency, education, student, emergency treatment

# ENTEROBACTER HORMAECHEI DRIVEN NOVEL BIOSYNTHESIS OF TIN OXIDE NANO AGGREGATES AND EVALUATION OF ITS ANTI-AGING, CYTOTOXIC, AND ENZYME INHIBITION POTENTIAL

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## INTRODUCTION:

Nanotechnology is a research hotspot that has gained considerable interest due to its potential inferences in the biosciences, medical, and engineering disciplines. Researchers have assessed plant extracts and bio-templates mediated Nps synthesis. It also focuses on the photocatalytic activity, gas sensing ability, and another biological potential of these biogenic SnO<sub>2</sub> Nps. As the use of biological entities, including plants and bacteria develops in popularity, much research work has been done on it.

## OBJECTIVE(S):

1. The present study uses biomass from *Enterobacter* strain G52 to create bio-inspired metallic iron nanoparticles (SnO<sub>2</sub> NPs).

## METHODOLOGY:

The bio-synthesized NPs were extensively analyzed using UV spectroscopy, XRD, TGA, SEM, EDX, and FTIR techniques.

## RESULTS:

The identification of the crystalline phase was confirmed by XRD. The SEM technique elucidated the morphological characteristics and size of SnO<sub>2</sub> NPs. SEM investigation revealed that SnO<sub>2</sub> NPs have a size of 10 nm. FTIR study affirmed the capping of NPs by different compounds found in biomass of the *Enterobacter hormaechei* strain EAF63. Later, EDX confirmed the elemental composition of NPs. Moreover, the synthesized SnO<sub>2</sub> NPs were employed for important biological activities such as Anti-aging, anti-Alzheimer's, Anti-inflammatory, Anti-larvicidal, and antibacterial activity against sinusitis pathogens.

## CONCLUSION:

As an outcome, *Enterobacter hormaechei* strain EAF63 mediated SnO<sub>2</sub> NPs might be considered safe and effective nanoplatforms for multifunctional biological applications in the field of nanomedicine.

## KEYWORDS:

Sinusitis, Anti-Larvicidal, Anti-Aging, SnO<sub>2</sub> Nps, *Enterobacter Hormaechei* Strain EAF63 G52

# **EFFECT OF SOFT CONTACT LENSES ON THE MEASUREMENT OF INTRAOCULAR PRESSURE WITH NON-CONTACT PNEUMOTONOMY**

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## **INTRODUCTION:**

Intraocular pressure is the fluid pressure inside the eye. Pressure is a measure of force per area. Soft contact lenses are made of soft, flexible plastics that allow oxygen to pass through to the cornea. Soft contact lenses are comfortable and easy to use.

## **OBJECTIVE(S):**

1. To evaluate the effect of soft contact lenses on intraocular pressure in low degree myopia.

## **METHODOLOGY:**

The non-invasive observational study was carried out from September 2021 to May 2022 at the University of Faisalabad. A total of 50 female myopes aged between 18 to 25 years were included through the probability sampling technique. After taking the consent form, the ocular examination was carried out. Intraocular pressure (IOP) was measured without a Contact lens with Air puff NCT, then immediately wear the contact lens, and then after 2 hours of contact lens wear the IOP measurement was done. We included those who did not have any ocular and systemic diseases. Data analysis was done by one-way repeated measures ANOVA of SPSS version 20.

## **RESULTS:**

The intraocular pressure (IOP) measured over myopic lenses of - 1.00 and - 3.00 D showed lower values within the mean range of 2 mm Hg. There was no significant difference with and without soft contact lenses.

## **CONCLUSION:**

This study showed that air-puff non-contact pneumotometry is a useful method in patients wearing low degree myopic contact lenses and contact lens wearers who, when measuring intraocular pressure, would not need to remove the contact lenses before the examination.

## **KEYWORDS:**

Myopia, soft contact lens, intraocular pressure.

# **EFFECT OF SIZE AND POSITION OF CHALAZION ON THE TYPE OF ASTIGMATISM INDUCED**

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## **INTRODUCTION:**

A chalazion is a chronic granulomatous inflammation of the meibomian gland or sometimes caused by retained Sebaceous secretion of the Zeis gland. Astigmatism is a condition of refractive error in which parallel rays of light coming from infinity do not come to a signal point focus but form focal lines when accommodation is at rest.

## **OBJECTIVE(S):**

1. To determine the effect of chalazion over astigmatism.
2. To determine the effect of size and position of chalazion on the type of astigmatism.

## **METHODOLOGY:**

This study was conducted with the approval of the ethical committee at the University of Faisalabad. A descriptive cross-sectional study design was used to conduct this study. A convenient sampling technique was used. A descriptive study and chi-square test were applied through the SPSS version 20 to analyze the data. The study duration was from Sep-May 2022. Self-designed examination-based proforma was used to collect the relevant data including chalazion size measured by mm ruler and astigmatism assessed by autorefractor-keratometer. The 40-sample size included both genders, an age ranging from 15 to 50 years.

## **RESULTS:**

The result shows that the effect of size and position of chalazion on the type of astigmatism there is no significant association of effect and size and position of chalazion on the type of astigmatism induced ( $P=0.149$ ).

## **CONCLUSION:**

This study showed that there is no significant association between the effect of size and position of chalazion on the type of astigmatism. This study also concluded that the effect of size and position of chalazion on the type of astigmatism induced. Chalazion early treatment and incision had great importance to prevent astigmatism in patients.

## **KEYWORDS:**

Chalazion, astigmatism.

# EFFECTIVENESS OF SYNTONIC PHOTO-THERAPY IN DIFFERENT DEGREES OF ANISOMETROPIC AMBLYOPIA

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## INTRODUCTION:

Anisometropia is a clinically significant difference in refractive error that exceeds some criterion amount, e.g.  $\geq \pm 0.75D$ . Syntonic phototherapy is effective in anisometropic amblyopes that show improvement in Visual Acuity, Contrast Sensitivity, and Retinal Nerve Fiber Layer thickness

## OBJECTIVE(S):

1. To assess and compare visual acuity, contrast sensitivity, and retinal nerve fiber layer thickness with syntonic phototherapy in anisometropic amblyopia.

## METHODOLOGY:

A Quasi-experimental study was carried out from September 2021 to May 2022 at Madina Teaching Hospital in Faisalabad Pakistan. A total of 45 subjects aged ranging from 8 to 18 years, of both genders, were included. 15 patients with mild, moderate, and severe anisometropic amblyopia were selected through the non-probability purposive sampling technique. Subjects were undergoing pre-assessment of Visual Acuity with LogMAR Chart and Contrast Sensitivity with Pelli-Robson Chart. After assessment syntonic phototherapy in form of red glasses was prescribed to the patient for 4 weeks (20 sessions). After 4 weeks post assessment of VA and CS was done. Data analysis was done by paired sample t-test and one-way ANOVA with SPSS20

## RESULTS:

Significant improvement was seen after therapy, the mean value of mild VA before and after syntonic therapy was 0.14133(P=0.01) and CS was -0.07000(P=0.04), RNFL was -0.630(0.02) VA of moderate was 0.24400(P=0.00), CS -0.09000(P=0.04), RNFL was -0.665(P=0.04) and severe VA was 0.24400(P=0.01), CS -0.06000(P=0.01) and RNFL -0.690(P=0.04). One-way ANOVA shows significant results for VA and non-significant for CS and RNFL.

## CONCLUSION:

Significant improvement was seen in Visual Acuity, Contrast Sensitivity, and RNFL Thickness in mild, moderate, and severe degrees of amblyopia. Improvement is more significant in severe anisometropic amblyopia as compared to mild and moderate.

## KEYWORDS:

Amblyopia, anisometropic amblyopia, syntonic phototherapy, visual acuity, contrast sensitivity

# EVALUATION OF DIFFICULTIES ASSOCIATED WITH UNDIAGNOSED PRE-PRESBYOPIA AND PRESBYOPIA

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## INTRODUCTION:

Presbyopia is common age-related farsightedness characterized by a decline in the accommodative ability of the intraocular crystalline lens. It can lead to the inability to focus on a near object. It can be either caused by a weakening of the ciliary muscle or loss of the lens capsule elasticity.

## OBJECTIVE(S):

1. To evaluate difficulties associated with undiagnosed pre-presbyopia and presbyopia in stitching units.
2. Difficulties were evaluated in subjects who are doing excessive near work in stitching units and were unaware of this condition.

## METHODOLOGY:

A Descriptive observational study design was conducted from September 2021 to May 2022 at stitching units, in Faisalabad. The total study sample of this study was 100 subjects taken from stitching units Age range from 35 to 55 years and before 35 in pre-presbyopia. Both males and females were included. The nonprobability convenient sampling technique was used to collect data. A detailed history was taken; visual acuity was assessed by Time Roman Chart. A questionnaire-based Performa was also filled with the information given by them after informed consent. The data were analyzed by SPSS version 21 for statistical analysis.

## RESULTS:

We observed through our research that there was a greater risk of asthenopia symptoms of undiagnosed presbyopes (77%) rather than pre-presbyopes (23%) in stitching.

## CONCLUSION:

This study conducted that the prevalence of undiagnosed pre-presbyopes is 23% and undiagnosed presbyopes 70% in stitching units. As an optometrist, we recommended they improve their sitting posture and use glasses for their near work along with work in good lighting conditions.

## KEYWORDS:

Presbyopes, pre-presbyopes, excessive near work

# EVALUATION OF RETINAL NERVE FIBER LAYER THICKNESS AND MACULAR THICKNESS IN ANEMIA

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## INTRODUCTION:

Anemia is a hematological disorder in which there is a reduction of red blood cells. Anemia is categorized into mild, moderate, and severe anemia with hemoglobin of 9 to 10.9, 7 to 8.9, and <7g/dl respectively. Oxygen is required by the retina for its structural and functional probity. In anemia due to low oxygen delivery to anterior and posterior segments of the eye, neovascularization starts. When these new vessels are damaged, they cause occlusion to normal vasculature of the retina. Proper nutrition and oxygen to the intra retina are deceased that's why Neuronal cell death and damage to retinal ganglion cells are caused. When the inner layers have been damaged the thickness of the retinal fiber layer and macula is decreased.

## OBJECTIVE(S):

1. To compare RNFL thickness and Macular thickness in different degrees of anemia

## METHODOLOGY:

This was a descriptive cross-sectional study conducted in Madinah Teaching Hospital Faisalabad. The duration of the study was September 2021 to May 2022. The sample of the study was 90 eyes of 45 subjects with 15 in mild, 15 in moderate, and 15 subjects with severe anemia. Both genders in the age group 10 to 25 years were included. Patients with thalassemia and any other systemic or ocular disease were excluded. Optical Coherence Tomography was used. Data analyzed by using the One-Way ANOVA test through SPSS VERSION 20

## RESULTS:

Macular thickness was decreased in all groups with a mean value of 198.7 in mild, 193.4 in the moderate, and 61.93 $\mu$ m in the severe anemic group. RNFL thickness was decreased in all groups with a mean value of 93.97 in mild, 96.23 is moderate and 78.9 $\mu$ m in severe anemic. The value of significance is <0.05 (p=0.001) which showed there is a significant statistical difference in Macular thickness and RNFL thickness of mild, moderate, and severe anemic groups.

## CONCLUSION:

As the severity of anemia increases, there is a significant decrease in RNFL and macular thickness.

## KEYWORDS:

Anemia, hemoglobin, optical coherence tomography, red blood cells

# **ASSESSMENT OF COLOR VISION AFTER PHACOEMULSIFICATION IN CATARACT PATIENTS**

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## **INTRODUCTION:**

The cloudiness of the intraocular crystalline lens is known as a cataract. Based on the structure of the lens, the senile cataract is subdivided into three types posterior subcapsular, nuclear, and cortical. Contrast sensitivity, visual acuity, color vision, and stereopsis are the components of visual function. As the age increases lens to act as a powerful filter decreasing the transmission of visible light specifically light of shorter wavelengths ranging from 400-550nm. In patients with age-related cataracts, color perception can be restored after phacoemulsification.

## **OBJECTIVE(S):**

1. To assess the improvement in color perception after phacoemulsification in cataract patients

## **METHODOLOGY:**

This Qusai experimental study design was carried out from September 2021 to May 2022 at Madinah teaching hospital, Faisalabad. A total of 60 patients of both genders will be included. The age group of 30-40, and 40-50 years undergoing phacoemulsification were included through the purposive sampling technique. Color vision was assessed preoperatively by using Ishihara plates and Frans worth D15 test and postoperatively by Frans worth D15 test. After 1 week of phacoemulsification, color was assessed again. Data analysis was done by descriptive and chi-square with SPSS version 20.

## **RESULTS:**

The preoperative percentage of Tritan was 98.4% and the postoperative percentage of Tritan was 1.6% with the help of charts and graphs in SPSS that shows that color vision improved in the blue axis after phacoemulsification.

## **CONCLUSION:**

The study includes that there is an improvement in color vision after phacoemulsification

## **KEYWORDS:**

Cataract, phacoemulsification, color vision.



# **EFFECT OF EX-VIVO NON-WET HOT EYE PAD THERAPY ON TEAR FILM STABILITY IN MEIBOMIUM GLAND DYSFUNCTION**

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## **INTRODUCTION:**

In Meibomian gland dysfunction, orifices of Meibomian glands are clogged so, glands are not secreting sufficient oil.

## **OBJECTIVE(S):**

1. To determine the effect of ex-vivo non-wet hot eye pad therapy on tear film stability in Meibomian gland dysfunction.
2. To assess improvement in evaporative dry eye and its associated symptoms.

## **METHODOLOGY:**

A Quasi-study design of a sample size of thirty patients aged 20-35 years females that have meibomian gland dysfunction with the evaporative dry eye was selected through purposive sampling technique at The University of Faisalabad from September 2021 – to May 2022. Contact lens users > one-year, mild refractive errors (Myopia, Hyperopia, Astigmatism), pregnant ladies, and patients with all systemic and ocular pathologies except dry eye were excluded. History, TBUT, and Meiboscale grading through a slit lamp were done for diagnosis. A hot eye pad was given twice a day for ten minutes, and assessment was done immediately, after thirty minutes, and after fifteen days follow up. Data analysis was done by SPSS software-20 and analyzed by using Repeated Measure ANOVA.

## **RESULTS:**

Results showed that hot eye pad therapy increased Meiboscale grade and TBUT, the significant value was ( $p < 0.05\%$ ). The mean value of Meiboscale was  $4.03 \pm 0.75$  at baseline and  $3.5 \pm 1.09$ ,  $3.5 \pm 1.09$ ,  $1.31 \pm 0.50$  at 1st, 2nd, and 3rd follow up respectively. The mean value of TBUT was  $1.35 \pm 0.48$  at baseline and  $1.6 \pm 0.50$ ,  $1.6 \pm 0.50$ ,  $2.96 \pm 0.18$  at 1st, 2nd and 3rd follow up respectively.

## **CONCLUSION:**

Results concluded that hot eye pad therapy improved Meiboscale grade by unclogged gland orifices which treated evaporative dry eye, and also resolved symptoms of Meibomian gland dysfunction.

## **KEYWORDS:**

Evaporative dry eye, Ex-vivo, Meibomian gland dysfunction

# **CORNEAL THICKNESS IN EXTRA-CAPSULAR CATARACT EXTRACTION AND PHACOEMULSIFICATION**

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## **INTRODUCTION:**

A cataract is a condition in which the crystalline lens of the eye becomes opacified which then leads to decreased vision. Phacoemulsification and Extracapsular cataract extraction are the two most commonly used surgical options for cataract extraction.

## **OBJECTIVE(S):**

1. To evaluate corneal thickness changes after phacoemulsification and ECCE.
2. To compare corneal thickness after phacoemulsification and ECCE.

## **METHODOLOGY:**

This Quasi-experimental study design was carried out from September 2021 to May 2022 at Madinah Teaching Hospital, Faisalabad. A total of 60 patients of both genders were included. The age group of 18-70 years undergoing cataract surgery was included through Non-Probability convenient-based sampling. Pre-operative corneal thickness readings including central and peripheral corneal thickness were noted using Corneal Topography. The patients were divided into two groups. One underwent Phacoemulsification and one underwent Extra-capsular cataract extraction. Then post-operative readings were taken after 1 week and 1 month of surgery. Data analysis was done by repeated measure ANOVA and Independent t-test with SPSS version 20.

## **RESULTS:**

The mean value of CCT for Phacoemulsification was  $M=532.7333$ ,  $SD=\pm 25.57738$  and for ECCE was  $M=546.4333$ ,  $SD=\pm 34.40397$  with  $p=.000$ . The mean values of PCT for phacoemulsification were  $M=661.8333$ ,  $SD=\pm 55.99759$  and for ECCE was  $M=721.6000$ ,  $SD=\pm 85.19414$  with  $p=0.18$  which indicates that the result is significant. When an independent t-test was applied, the p-value for CCT was .497 and for PCT was 0.059.

## **CONCLUSION:**

The study showed a significant increase in CCT and PCT after phacoemulsification as compared to ECCE.

## **KEYWORDS:**

Cataract, Corneal topography, Phacoemulsification, Refractive error

# **EFFICACY OF ANTI-ALLERGIC DRUGS ON TEAR FILM STABILITY OF PATIENTS WITH ALLERGIC CONJUNCTIVITIS**

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## **INTRODUCTION:**

Allergic conjunctivitis is the inflammation of the conjunctiva in response to allergens. Damage to epithelial cells means loss of mucin layer to the eye which leads to tearing film instability.

## **OBJECTIVE(S):**

1. To assess the efficacy of Olopatadine and Histazoline on tear film instability.
2. To compare the efficacy of Olopatadine and Histazoline on tear film instability.

## **METHODOLOGY:**

The Quasi-Experimental study design and non-probability sampling technique were used. The study was conducted from September 2021 to May 2022 at the Ophthalmology Department of Madinah Teaching Hospital Faisalabad. A total of 30 patients of 60 eyes and both gender with allergic conjunctivitis were included. After diagnosing patients with allergic conjunctivitis, pre-data was collected using Schirmer test II and they were divided into two groups in which one was given Olopatadine and the other Histazoline. Post-data was collected after 1 hour and 1 week. Data were analyzed by repeated measures ANOVA and independent sample t-test using SPSS version 20.

## **RESULTS:**

The mean values of baseline data of Olopatadine were 7.3 and Histazoline was 5.76. The mean value after 1 hour and 1 week of Olopatadine was 8.9 and 14.4 while the mean value of Histazoline was 6.23 and 9.1 respectively. P value is <0.05 (0.001) which indicates the result is significant.

## **CONCLUSION:**

Tear film instability was improved with both drugs but Olopatadine showed significantly better results.

## **KEYWORDS:**

Anti-allergic, Olopatadine, Allergic conjunctivitis

# **ANXIETY ASSOCIATED WITH LOCAL ANESTHESIA AMONG PATIENTS UNDERGOING EXTRACTION OF TEETH.**

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## **INTRODUCTION:**

Fear and anxiety related to dental procedures are the most common reasons why people avoid dental appointments. Control of pain and anxiety during local anesthetic injections has clinical importance in dental practice.

## **OBJECTIVE(S):**

1. The estimated percentage of anxiety to local anesthesia among individuals undergoing exodontia.
2. The determination of the association between previous dental experience with dental anxiety.

## **METHODOLOGY:**

A descriptive cross-sectional study was conducted in the oral and maxillofacial surgery ward of Peshawar Dental College Hospital for a duration of two months. A nonprobability consecutive sampling technique was used. All adult patients were included in the study. Medically compromised patients were excluded from the study. The modified dental anxiety scale was used to assess the anxiety of dental patients. Association between variables was found by the Chi-square test.

## **RESULTS:**

Among 120 patients, 57(47.5%) were male and 63(52.5%) were female. Most of the patients were in the age range of 18-29 (40%) having chief present complaints of pain (47.5%) in their lower right quadrant of teeth (32.5%). The majority (42.5%) of patients had a past dental history of extractions and had rated previous dental experience on a scale of 1-3 (58.5%). MDAS score 1-5 (31.7%) and 6-10 (25%) was found frequently. A significant Association of MDAS was found with gender  $p=.001$  and previous dental experience  $p=.041$ .

## **CONCLUSION:**

Gender and previous dental experience affect the anxiety levels of patients undergoing extraction of teeth.

## **KEYWORDS:**

Anxiety, MDAS, Local anesthesia.

# **AWARENESS AND EXPERIENCES OF ADVERSE EFFECTS OF ORAL ISOTRETINOIN IN EDUCATIONAL INSTITUTES OF PESHAWAR, PAKISTAN**

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## **INTRODUCTION:**

Isotretinoin is a prescription retinoid drug recommended for several skin conditions, especially severe acne. When no other treatment shows the result, isotretinoin is prescribed and it should be carefully monitored due to its drastic side effects which include depression, raised LFTs, gastrointestinal and dermatological disturbances, and teratogenicity.

## **OBJECTIVE(S):**

1. To find the frequency of use of isotretinoin as a prescription and non-prescription drug
2. To determine the knowledge about adverse effects of isotretinoin among the age group 18-30 years
3. To find out how frequently it is prescribed as a first-line drug

## **METHODOLOGY:**

This cross-sectional study is conducted on 390 participants that are residing in Peshawar. The age group is 18-30 years and both males and females are included in the study. Data is collected through a self-administered questionnaire categorized into demographic information and questions inquiring about the use and adverse effects of the drug.

## **RESULTS:**

The total number of responses was 390. 76 (19.49%) were male while 314 (80.51%) were female. The majority of respondents were of the age group 22 – 25 years (62.3%). Out of these 65% were aware of isotretinoin while 35% weren't. 132 (33.85%) have used the drug and 258 (66.15%) haven't. Out of the 132 respondents, the most commonly experienced side effects were dry/flaky lips (64.39%) and skin (56.82%), sun sensitivity (41.67%), and depression/anxiety (40.9%), hair loss (40.15%). Most used the drug after prescription (90.15%) although some non-prescription uses (9.85%) were also noted.

## **CONCLUSION:**

The majority of participants were in their early twenties and had a good knowledge of the unwanted effects of isotretinoin. Moreover, it was observed that the drug has been prescribed to them and most of the users experienced the adverse effects of Isotretinoin.

## **KEYWORDS:**

Isotretinoin, acne, students, adverse effects

# **A GLOBAL SYSTEMATIC REVIEW AND META-ANALYSIS OF THE EMERGING EVIDENCE ON RISK FACTORS, CLINICAL CHARACTERISTICS, AND PROGNOSIS OF MULTISYSTEM INFLAMMATORY SYNDROME IN ADULTS (MIS-A)**

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## **INTRODUCTION:**

After the discovery of multisystem inflammatory syndrome associated with SARS-CoV-2 in children (MIS-C) was made, similar cases have emerged in the adult population. This review aimed to analyze the risk factors, clinical course, and prognosis of the multisystem inflammatory syndrome in adults (MIS-A).

## **OBJECTIVE(S):**

1. This review aimed to analyze the risk factors, clinical course, and prognosis of the multisystem inflammatory syndrome in adults (MIS-A).

## **METHODOLOGY:**

A comprehensive literature search was conducted using several databases for cases reporting MIS-A from December 1st, 2019, to September 9th, 2021. The case definitions used to classify potential cases were those recommended by the World Health Organization, Center for Disease Control (CDC), and individual country/physician classification. The meta-analysis was performed using Comprehensive Meta-Analysis 2.2.027 and RevMan 5.4.1, employing 95% confidence intervals (CI).

## **RESULT:**

Seventy studies were assessed for full-text eligibility, out of which 38 studies were finally included. The mean age of included study population was  $32.0 \pm 9.9$  years. The most common symptoms reported were fever (87.5%, 95% CI: 76.0%-93.9%), and diarrhea (48.2%, 95% CI: 35.5%-61.1%) with ventricular tachycardia (58.9%, 95% CI: 45.7%-71.0%) commonly reported on electro-cardiac assessment. The most common inflammatory marker was elevated C-Reactive protein (78.6%, 95% CI: 65.9%-87.4%).

## **CONCLUSION:**

The findings suggest that MIS-A is a serious hyperinflammatory condition, albeit similar to symptoms similar to MIS-C, but might require specialized medical therapies if severe. Our collated findings will help clinicians identify the typical presenting symptoms and optimal management of MIS-A. Further research is required to understand the long-term prognosis and the correlation between COVID-19 and MIS-A to understand its pathogenesis and clinical spectrum.

## **KEYWORDS:**

Multisystem, Inflammation, COVID-19, SARS-CoV-2, MIS-A

# **A STUDY OF ASSESSMENT OF MENOPAUSAL SYMPTOMS AMONG MIDDLE-AGED PAKISTANI WOMEN**

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## **INTRODUCTION:**

Menopause is a normal physiological change experienced by middle-aged women and is associated with a variety of unpleasant symptoms including hot flushes, night sweats, anxiety, vaginal dryness, depression, and insomnia. These symptoms can be severe enough to affect normal daily activities.

## **OBJECTIVE(S):**

1. To determine the menopausal status of Pakistani women aged 40-60 years.
2. To determine menopausal related symptoms among phases of women's menopause

## **METHODOLOGY:**

A cross-sectional study was done in 2021 on 437 females aged 40-60 years who presented with OPD in different hospitals in Karachi. Women with induced menopause, receiving hormonal treatment, having medical problems like thyroid disorders, diabetes mellitus, and hypertension, Patients with hysterectomy, chemo & radiotherapy, and those who refused to participate were not included. The modified Menopausal Rating Scale (MRS) was used to assess the frequency and severity of menopausal symptoms. SPSS-24 was used for analysis. The Chi-square test was used for statistical analysis. P value < 0.05 was considered significant.

## **RESULTS:**

The majority of women (66%) were between 40-50 years. Women were equally divided into pre-menopausal (39%) and post-menopausal (40%). Prevalence of menopausal symptoms was mostly higher were sleep problems (33%), Joints-muscular discomfort (29%), and hot flushes and sweating (26%). The frequency of symptoms was all mild in nature were heart-discomfort (30%), depressive mood (37%) Irritability (42%).

## **CONCLUSION:**

The study indicates the prevalence of menopausal symptoms was mostly mild except for hot flushes, sweating, and joint and muscular pain. More attention is warranted to manage these symptoms in postmenopausal women.

## **KEYWORDS:**

Menopause, pre-menopause, post-menopausal, women's health, quality of life.

# **CASE REPORT: CONGENITAL INSENSITIVITY TO PAIN WITHOUT ANHIDROSIS**

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## **INTRODUCTION:**

Congenital Insensitivity to Pain (CIP) is a condition present from birth that inhibits the ability to perceive physical pain. Affected individuals are unable to feel pain in any part of their body. Although they feel discriminative touch, patients are unable to perceive what any person with a normal functioning sensory and autonomic nervous system would describe as painful. The inability to perceive pain has been attributed to a rare autosomal recessive trait on chromosome 2q24.3.

## **OBJECTIVE(S):**

1. The main purpose of this study was to differentiate between the HSANS group of disorders and to classify the patient's ailment correctly as CIP.

## **METHODOLOGY:**

Clinical Case report obtained through examination and history provided by patient's attendants.

## **RESULTS:**

A 6-year-old boy was presented with the inability to perceive pain. He had multiple injuries that a person with a normally functioning nervous system would not have obtained. On further asking parents for history and examining the child it was revealed that he was born with congenital insensitivity to pain. By having prior knowledge of different types of disorders that could cause insensitivity to pain and by physical examination and x-rays provided we were able to diagnose the child with Congenital Insensitivity to Pain without anhidrosis.

## **CONCLUSIONS:**

We still know very little about CIP so diagnosing and treating it is quite difficult. Naltrexone and Naloxone have been suggested to improve quality of life but even they have varying degrees of success. Naloxone and Naltrexone are opioid antagonists and as opioids block pain receptors, these drugs work by unblocking them. Measures can be taken by parents to make the child's environment safer to lessen the frequency or severity of the injuries. By comparing similar case reports we will be able to differentiate it and diagnose it more easily, to an extent by increasing its awareness in the medical community.

## **KEYWORDS:**

CIP, anhidrosis, Chromosome 2q24.3.



# **A RARE CASE OF CRIGLER-NAJJAR SYNDROME TYPE II IN A 14-YEAR-OLD BOY WITH CELIAC DISEASE: A CASE REPORT AND UPDATED REVIEW OF THE LITERATURE FROM 2010 TO 2022**

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## **INTRODUCTION:**

CN type 1 causes severe jaundice and neurologic impairment due to bilirubin encephalopathy, leading to permanent neurologic sequelae. CN type 2 leads to lower serum bilirubin concentration and the patients who are affected survive without neurologic impairment. There is no association in the current literature about celiac disease. In light of the clinical relevance, the authors have presented a rare finding of CNS type II in a 14-year-old boy with celiac disease and a literature review on the management and outcome of CNS among the pediatric population.

## **OBJECTIVE(S):**

1. To present a finding of CNS type II with celiac disease
2. To conduct a literature review on the management and outcome of CNS among the pediatric population.

## **METHODOLOGY:**

The patient's History, Physical Exam, and Investigations lead to the diagnosis. We conducted a thorough review and collated all CN types I and II cases, considering their age, gender, disease onset, type of CN syndrome, clinical features, laboratory findings, associated diseases, and treatment.

## **RESULTS:**

The addition of phenobarbital resulted in a marked improvement of icterus.

## **CONCLUSION:**

We report a rare case of Crigler-Najjar syndrome II associated with celiac disease and how the patient responded to phenobarbital. Crigler-Najjar type II is the less severe. However, reports exist of bilirubin-induced encephalopathy.

## **KEYWORDS:**

Jaundice, Bilirubin, Phenobarbital

# SYNTHESIS OF ZINC OXIDE NANOPARTICLES (ZNO-NPS) USING *PARACLOSTRIDIUM BENZOELYTICUM* BACTERIUM STRAIN 5610 AND THEIR MULTIPLE BIOLOGICAL APPLICATIONS USING MICE MODEL

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## INTRODUCTION:

Nanotechnology is a research hotspot that has gained considerable interest due to its potential inferences in the biosciences, medical, and engineering disciplines.

## OBJECTIVE(S):

1. This study aims for the bacterium-mediated synthesis of zinc oxide nanoparticles (ZnO-NPs) utilizing *Paraclostridium benzoelyticum* strain 5610 as a capping and reducing agent.

## METHODOLOGY:

We presented a low-cost, eco-friendly, and efficient bacterium-mediated synthesis of zinc oxide nanoparticles (ZnO-NPs) utilizing *P. benzoelyticum* strain 5610 as a capping and reducing agent. Scanning electron microscopy, Transmission electron microscopy, X-ray diffraction, Fourier transform infrared spectroscopy, energy dispersive X-ray, and UV-vis spectroscopy were used to physiochemically characterized the biosynthesized ZnO-NPs.

## RESULTS:

A major narrow peak at 441 nm was observed using UV-visible spectroscopy, verifying the presence of nanoparticles. FTIR analysis confirmed the presence of various reducing metabolites on the surface of ZnO. ZnO-NPs. The synthesized nanoparticles were investigated for biological activity against *H. suis*, *H. bizzozeronii*, *H. felis*, and *H. salomonis*. *H.* was the most vulnerable strain, with an inhibitory zone of  $19.53 \pm 0.62$  mm at a 5 mg/mL dosage. In the arthritis model, the solution of ZnO-NPs showed an  $87.62 \pm 0.12\%$  inhibitory effect of edema after 21 days when linked with that of the standard drug.

## CONCLUSION:

Keeping in view the biological importance of ZnO-NPs, we may readily get the conclusion that *Paraclostridium benzoelyticum* strain 5610 mediated ZnO-NPs will be a prospective anti-diabetic, antibacterial, antiarthritic, and anti-inflammatory agent *in vivo* experimental models and can be used as a potent antidiabetic drug.

## KEYWORDS:

*Paraclostridium Benzoelyticum* Strain 5610, Bacteria, Anti-diabetic, Anti-inflammatory, Arthritis

# ASSOCIATION OF INFLAMMATORY MARKERS WITH COVID-19 DISEASE OUTCOME- A HOSPITAL-BASED STUDY

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## INTRODUCTION:

COVID-19 is a pandemic respiratory infectious disease. World Health Organization declared COVID-19 a pandemic in Feb 2020. We have been working as a team to observe the pandemic since it hit our country and have been observing the different demographic, hematologic, and inflammatory mediators that affect the outcome of the disease.

## OBJECTIVE(S):

1. To assess the prognostic values by determining the correlation of inflammatory markers with severity and mortality of COVID-19 in a hospital-based study

## METHODOLOGY:

This retrospective study was conducted from 1st June 2020 to 30th Sept 2020 in the Department of Pathology, Qazi Hussain Ahmed Medical Complex, Nowshera, and Post Graduate Medical Institute, Hayatabad Medical Complex, Peshawar. Out of 215, 71 cases that had all the relevant information available on a chart in the Department of Pathology, were selected. The collected data was analyzed using SPSS.

## RESULTS:

Out of 71 patients, 54(76.1%) were males and 17(23.9%) were females. 35 (49.3%) had age>55 years while 31(43.7%) were in the age range of 36-55 years. The AUC for d-dimer was (0.725, 95% CI 0.599-0.855) followed by CRP (C-Reactive Protein) (0.565 95%CI 0.422-0.7.8) and ferritin (0.519 95%CI 0.36-0.679). The median value of d-dimer was significantly higher in the deceased as compared to the survivors ( $p<0.05$ - Mann Whitney U test). The CRP and ferritin levels were not significantly different in the study groups. There was a significant positive uphill correlation between the hospital stay with higher values of d-dimers ( $p=0.01$ ,  $r-s= 0.287$ ).

## CONCLUSION:

D-dimer is the main prognostic factor that predicts mortality in COVID-19. Mortality due to COVID-19 was found not to be significantly associated with Ferritin, CRP, Blood Groups, or Age.

## KEYWORDS:

Ferritin, D-dimer, C-Reactive Protein, Mortality, COVID-19.

# PREVALENCE OF MULTIDRUG-RESISTANCE PATHOGENS ISOLATED FROM WOUND INFECTIONS PATIENTS VISITING COMBINED MILITARY HOSPITAL PESHAWAR, PAKISTAN

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## INTRODUCTION:

In Pakistan, it is a common practice that antibiotics can be purchased without a doctor's prescription researchers have performed previously in Pakistan to see the multi-drug resistance pattern of the different specimens. However, a study targeting MDR wound infection is crucial. Therefore, this study aimed to analyze the MDR pattern of bacteria isolated from wound infections patients.

## OBJECTIVE(S):

1. The purpose of this study was to find out the prevalence of various bacterial microbes and their antibiotic susceptibility in different sorts of wound contaminations.

## METHODOLOGY:

A total of 200 pus samples were collected from patients of all genders and ages for the duration of six months. The samples were inoculated on MacConkey agar media, Blood agar, and Chocolate agar media for primary identification of pyogenic bacteria such as *Pseudomonas* spp, *S. aureus*, *E. coli*, *Klebsiella* spp, *Enterococcus* spp. After growth colonies were presumably identified according to colony formation, pigmentation, elevation, and margins. After that, the presumed isolates were further tested for further confirmation. The isolates were then examined through biochemical tests.

## RESULTS:

This study depicted that 64% of men are more infected than women 36%. Among infectious agents, *S. aureus* (30%) was the most prevalent. *E. coli* 24% *Pseudomonas* 24% *Klebsiella* spp. 10% *Streptococcus* 4% & *Proteus* spp 3% *Acinetobacter* spp. 3% and *Enterococcus* 2% were the least prevalent. And the minimum number of *Candida* spp 0.83% was also detected. Mostly the Gram-positive bacteria were resistant against the Cephalosporin group and were sensitive against the Carbapenem group for instance Cefixime 92% and Ceftazidime 94% were extremely resistant to *Staph. aureus*. In *Enterococcus* spp Imipenem was 20% and Meropenem was 80%. On the contrary, the Gram-negative bacteria *Acinetobacter*, *Pseudomonas* spp, and *E. coli* depicted high resistance to the antibiotics.

## CONCLUSION:

Prevalence of MDR to the antibiotics that were not resistant to pathogenic species decades ago was found to be emerging gradually into an alarming situation which is most likely due to the excessive usage, partial medication, and self-medication along with the other factors.

## KEYWORDS:

Multi-drug resistance, wound infections, antibiotics

# BIOFABRICATION OF AGNPS USING PARACLOSTRIDIUM BENZOELYTICUM, ITS CHARACTERIZATION, AND EVALUATION OF ITS BIOMEDICAL APPLICATION

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## INTRODUCTION:

Nanotechnology is a fast-paced science that is connected to other sciences. Several industrial and environmental concerns, including those in medicine, solar energy conversion, catalysis, and water treatment, may be addressed through the application of these unique features. Bacteria are one of the most important biological sources for nanoparticle production because of their advantage to produce nanoparticles in large quantities.

## OBJECTIVE(S):

1. The present study aims to use *Paraclostridium benzoelyticum* strain 5610 to synthesize biogenic silver nanoparticles (AgNPs).

## METHODOLOGY:

The biogenic nanoparticles were extensively analyzed using UV spectroscopy, XRD, SEM, EDX, and FTIR techniques. The identification of the crystalline phase was confirmed by XRD.

## RESULTS:

The SEM technique elucidated the morphological characteristics and size of AgNPs. SEM investigation revealed that AgNPs size is 30.71nm. The antibacterial activity of AgNPs was tested against four distinct sinusitis pathogens: *H. influenza*, *S. pyogenes*, *M. catarrhalis* and *S. pneumonia* with disc diffusion test values of 17.49±82, 12.16±25, 19.75±46 and 15.31±73 mg/mL, the appearance of a clear zone around the AgNPs disc demonstrated that the AgNPs had potent antibacterial activity. The finding of anti-inflammatory activity revealed that the bacterium-mediated AgNPs had a strong inhibitory action. Biogenic AgNPs are also capable of being used as anti-aging agents.

## CONCLUSION

In the light of these findings, these biosynthesized AgNPs could be a good option for the treatment of various diseases including cancer, bacterial infections, and other inflammatory diseases, owing to their strong anti-cancer potential and efficient antioxidant properties.

## KEYWORDS

*Paraclostridium Benzoelyticum*, biogenic silver nanoparticles

# EFFECTIVENESS OF OPTOMETRIC PHOTOTHERAPY IN ESOTROPIA

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## INTRODUCTION:

Accommodative esotropia (AE) is the most common form of convergent strabismus caused by over convergence in response to accommodation. Optometric Phototherapy is a new treatment for AE. Refractive accommodative esotropia (RAE) is caused by hypermetropia whereas, non-refractive accommodative esotropia (NRAE) is caused by a high AC/A ratio and is unrelated to the refractive error.

## OBJECTIVE(S):

1. To assess the effect of Optometric Phototherapy in a refractive accommodative esotropia (RAE) and non-refractive accommodative esotropia (NRAE).

## METHODOLOGY:

This Quasi-Experimental study was conducted in Madinah Teaching Hospital Faisalabad from September 2021 to May 2022. 30 subjects were selected under the inclusion and exclusion criteria from both genders, aged 6 to 18 years via non-probability purposive sampling. After informed consent, in pre-assessment Hirschberg and cover uncover tests were performed. The accommodative convergence/accommodation (AC/A) ratio was calculated through the Heterophoria method in NRAE. The angle of deviation (AD) at near and far was measured through a prism cover test in both RAE and NRAE. Optometric phototherapy with red-orange (alpha-delta) filters was prescribed (20 minutes) for 4 weeks. The pre and post-therapy data were analyzed using SPSS version 20 by paired sample t-test.

## RESULTS:

A significant reduction was seen in the AD at a near RAE mean of  $3.222 \pm 1.309$  ( $P=0.00$ ) and a far mean of  $2.111 \pm 1.605$  ( $P=0.001$ ). The reduction in AD near NRAE mean of  $3.667 \pm 0.778$  ( $P=0.00$ ) and far means of  $1.500 \pm 1.784$  ( $P=0.014$ ) and AC/A ratio in NRAE mean  $0.9833 \pm 0.5024$  ( $P=0.002$ ).

## CONCLUSION:

After Optometric Phototherapy significant reduction was seen in the AD both near and far in RAE and NRAE. AC/A ratio also improved in NRAE.

## KEYWORDS:

Strabismus, esotropia, phototherapy.

# EFFECT OF NATURAL HONEY ON MACULAR THICKNESS, RETINAL NERVE FIBER LAYER THICKNESS, AND OPTIC NERVE HEAD PARAMETERS IN MYOPES

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## INTRODUCTION:

Honey has an antioxidant estrogenic and vasodilatory effect on the retina to increase macular, Retinal Nerve Fiber Layer Thickness and optic nerve head parameters in myopes. In Pakistan, 36.5% population was affected by myopia. Prevalence of myopia from 2015-2019 increased from 3.5% to 5.7% to 21.5%, almost about a 400% increase in 2020

## OBJECTIVE(S):

1. To evaluate the effect of natural honey on macular thickness, retinal nerve fiber layer thickness, and optic nerve head parameters in myopes.

## METHODOLOGY:

A Quasi-experimental design was performed from September 2021 to May 2022 at Ophthalmology Department, Madina Teaching Hospital, Faisalabad. In this study after taking informed consent, a sample size of 30 subjects with moderate to high myopia, including both genders, age range of 20-35 years was included. History, refraction, and OCT were performed and guided subjects to eat honey daily 1 with a tablespoon. The follow-up was after 15 and 30 days of the initial visit. The subjects with mild myopia and all ocular and systemic pathologies were excluded. Data was gathered with help of Performa and recorded in SPSS version-20 and analyzed by using Repeated measure ANOVA.

## RESULTS:

The results reveal that the base line thickness of macula, RNFL and rim area, cup area and CD ratio was  $324.7 \pm 42.8$  ( $P < 0.001$ ),  $85.2 \pm 7.3$  ( $P = 0.00$ ),  $1.36 \pm 0.27$  ( $P = 0.00$ ),  $0.63 \pm 0.35$  ( $P < 0.001$ ),  $0.48 \pm 0.12$  ( $P = 0.00$ ) The thickness after 30 days of honey intake was  $368.9 \pm 38.9$  ( $P < 0.001$ ),  $97.7 \pm 8.2$  ( $P = 0.00$ ),  $1.79 \pm 0.37$  ( $P = 0.00$ ),  $0.49 \pm 0.31$  ( $P < 0.001$ ),  $0.39 \pm 0.11$  ( $P = 0.00$ ).

## CONCLUSION:

The study showed that there is an increase in macular and RNFL thickness and Rim area while the cup area and cup disc ratio was decreased.

## KEYWORDS:

Anti-inflammatory, Antioxidant, Estrogenic, Honey, OCT.

# **EFFECT OF IRIS MINI SOFTWARE ON ASTHENOPIA AND SLEEP CYCLE**

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## **INTRODUCTION:**

Excessive screen work and blue light exposure cause muscle fatigue, and asthenopic symptoms and also disturb the sleep cycle because it suppresses the melatonin hormone that regulates the sleep cycle. Iris Mini software filters the blue light which consequently prevents the occurrence of these symptoms.

## **OBJECTIVE(S):**

1. To evaluate the effect of Iris Mini Software on asthenopic symptoms in screen users.
2. To evaluate the effect of Iris Mini Software on the Sleep cycle in screen users.

## **METHODOLOGY:**

The longitudinal interventional study was conducted from September 2021 to May 2022 at The University of Faisalabad. The sample was 30 emmetropes of ages between 18 to 30 years and was taken by non-probability convenient sampling technique. All subjects had screen time of 5-6 hours, with a history of asthenopia and disturb sleep cycle were included. All other ocular pathologies, refractive errors, and associated problems like Migraine, insomnia, and other sleep disorder were excluded. The asthenopia and sleep cycle were assessed before and after installing the Iris Mini software in their devices after a month of follow-up taken weekly by using a self-designed questionnaire proforma. Data analysis was done by Chi Square with SPSS version 20 to check the association between relief of asthenopia after using Iris Mini in screen users.

## **RESULTS:**

The study aimed to improve the asthenopia and sleep cycle. The result was highly significant with  $p=0.000$  in patients who used this application for a month

## **CONCLUSION:**

This study concluded that Iris Mini software is effective for improvement in asthenopia and sleep cycle.

## **KEYWORDS:**

Asthenopia, blue light, melatonin, sleep-wake cycle



# EARLY PRESBYOPIA AND ITS ASSOCIATIVE RISK FACTORS

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## INTRODUCTION:

Premature presbyopia is a condition in which presbyopia symptoms appear earlier than normal age due to different causes. The prevalence of presbyopia in low- and middle-income countries is not well known but suggests that more than the people over 30-years have presbyopia.

## OBJECTIVE(S):

1. To evaluate the frequency of early presbyopia
2. To evaluate the risk factors of early presbyopia

## METHODOLOGY:

It was a hospital-based study conducted in Madinah teaching hospital, Faisalabad from September 2021 to May 2022. A cross-sectional study design and convenient base sampling techniques were used to collect data. A total of 800 patients of both genders, aged 25 years or above were selected after taking informed consent of the patient and the early presbyopia person who falls in the inclusion criteria were examined in detail for the distant and far visual acuity using a log Mar chart and times roman chart respectively. Measurements of accommodative amplitude, working distance, and height were taken and self-designed questionnaires were filled out for the risk factors of early presbyopia. Data were analyzed by using the SPSS 20. All the ocular and systemic disease patients were excluded.

## RESULTS:

The frequency of early presbyopia in the sample of 800 patients was 12 % (106). Females were more prevalent (72%) compared to males (28%). The main risk factor was female gender, excess near work, short height, multiparity in females, and exposure to sunlight.

## CONCLUSION:

Avoiding smoking, adjustment of proper working distance, use of sunglasses to protect the eye from the sun, and lowering the usage of screens are the utmost steps that can be taken to prevent early presbyopia

## KEYWORDS:

Smoking, Presbyopia, Risk factors

# PROFILE OF HOSPITAL ADMISSIONS FOR PATIENTS WITH CARDIOVASCULAR DISEASES IN PESHAWAR INSTITUTE OF CARDIOLOGY

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## INTRODUCTION:

Cardiovascular diseases (CVDs) are one of the most common causes of death among the population of developing countries. Major CVDs include ischemic heart disease, hypertension, heart failure, and rheumatic heart disease. Thousands of CVDs cases remain undiagnosed due to a lack of proper and specialized primary health care setups.

## OBJECTIVE(S):

1. To identify the frequency and causes of hospital admissions of patients with CVDs during a specified period

## METHODOLOGY:

A cross-sectional descriptive study was carried out from the record register of Peshawar Institute of Cardiology from February 2021- to August 2021. Data analysis was carried out using Microsoft Excel 2007. The study duration was approximately 6 months. Ethical consideration of patients was also taken into account.

## RESULTS:

A total of 2302 hospital admissions of CVD patients of varying etiology were recorded between February 2021- August 2021. Out of these 2302 cases, 1958 were males and 271 were females. Concerning the category of a gender other than male and female, around 73 cases were identified. An overall dominance of males was seen while the male-female ratio of CVDs as per the data was 7:1. Angioplasty, Percutaneous Coronary Intervention (PCI), Coronary Artery Bypass Grafting (CABG), Aortic Valve Replacement (AVR), and Ventricular Septal Rupture (VSR) were identified as the reason for hospital admissions. Angioplasty and PCI were identified to be the cause of 2180 hospital admissions, whereas, AVG, CABG, and VSR accounted for 122 hospital admissions.

## CONCLUSION:

A total of 2302 hospital admissions were reported in Peshawar Institute of Cardiology between February 2021-August 2021. The majority of patients admitted due to various CVDs were males. Angioplasty and PCI accounted for approximately 94.7% of hospital admissions. The majority of the admitted patients belonged primarily to the urban areas of KPK.

## KEYWORDS:

Cardiovascular Diseases, Hospital Admissions, Khyber Pakhtunkhwa

# **COMPARATIVE ASSESSMENT OF VITAMIN D AND PARATHYROID HORMONE AS A RISK FACTOR FOR MYOCARDIAL INFARCTION AND THEIR CORRELATION WITH LIPID PROFILE**

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## **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(S):**

1. The present study assessed serum vitamin D and PTH in MI and determined their correlation with lipid profile parameters.

## **METHODOLOGY:**

This cross-sectional comparative study assessed serum vitamin D, PTH, and lipid profiles in patients (n=30) with recent MI (< 1-month history). Comparisons were made with healthy age-matched controls (n=30) using an 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.

## **KEYWORDS:**

Myocardial infarction, vitamin D, parathyroid hormone, dyslipidemia, and cardiovascular diseases.

# **ASSESSMENT OF KNOWLEDGE REGARDING RABIES AND ITS MANAGEMENT AMONG THE GENERAL PRACTITIONERS IN PAKISTAN**

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## **INTRODUCTION:**

Rabies is a communicable zoonotic disease, caused by Lyssavirus of the Rhabdovirus family. It is a fatal but preventable disease and yet it is neglected. It is transmitted through warm-blooded animals such as dogs, raccoons, bats, and cats. In developing countries, rabies is a major health-related problem due to a large number of stray dogs and cats, also due to the less knowledge of general practitioners regarding the management of rabies and rabies itself.

## **OBJECTIVE(S):**

1. To assess the knowledge regarding rabies and its management among the general practitioners in Pakistan.

## **METHODOLOGY:**

A cross-sectional study was conducted from January to December 2021 on general practitioners in different cities of Pakistan. Using non-probability convenient sampling techniques, a pre-tested and structured questionnaire was administered. Knowledge regarding rabies and its management was assessed. Data were analyzed using SPSS version 24. Frequency tables were used to describe the data.

## **RESULTS:**

Out of a total of 500 general practitioners, 89.4% correctly knew about the causative agent and (49.4%) about the vector of rabies. More than half of the general practitioners 53.6% responded correctly that both cell culture vaccine and nervous tissue vaccine can be used for rabies prevention and 52% had knowledge regarding the anti-rabies vaccination schedule. Regarding management of dog bite wounds 44.6% had appropriate knowledge about irrigation and 57.2% about suturing. Collectively 52% of general practitioners were aware that a combination of antibiotics and anti-tetanus serum should be given to a dog bite patient.

## **CONCLUSION:**

This study revealed that the knowledge of rabies and its management was inadequate among general practitioners of Pakistan. Frequent sessions on awareness and management of dog bite patients should be held for general practitioners to control and reduce the incidence of human rabies-related deaths.

## **KEYWORDS:**

Rabies, knowledge, management

**PUBLIC  
HEALTH AND  
SOCIAL  
SCIENCES**



# RAISED BLOOD GLUCOSE LEVEL AS A RISK FACTOR FOR MYOCARDIAL INFARCTION IN DIABETIC PATIENTS

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## INTRODUCTION:

Diabetes is a rising chronic illness in developing countries. This research has been conducted to assess the extent of Diabetes management and outcome. Myocardial Infarction (MI) is the major outcome of Uncontrolled Diabetes, thus the main objective of this research is to determine raised blood glucose as a risk factor for MI in the Pakistani population.

## OBJECTIVE(S):

1. To compare the frequency of MI in controlled and uncontrolled diabetics.

## METHODOLOGY:

A cross-sectional study with purposive sampling on 237 patients aged 30 -80 years was carried out in 3 major hospitals of Peshawar i.e., KTH, HMC, and PIC. The inclusion criteria were Diabetic patients with HbA1C <7 taken as "controlled diabetics" and HbA1C >7 as "uncontrolled diabetics". The study was done from April 2021 to March 2022 and the data were collected using structured questionnaires and patient history that was analyzed in SPSS software.

## RESULTS:

The highest number of MIs occurred in diabetics with HbA1c 8-9% (47.9% of all MIs). There was a significant association between increasing HbA1c levels and the incidence of MI ( $p=0.002$ ). The adjusted prevalence odds ratio for MI in uncontrolled diabetics was 6.105 (95%CI, 2.42-15.43). With a 1% increase in HbA1c, there was a 10 % increase in the proportion of MIs (CI 95%).

## CONCLUSION:

From this study, it became evident that HbA1c level 8-9% was most significantly associated with the risk of MI in uncontrolled diabetics.

## KEYWORDS:

Myocardial Infarction, Uncontrolled diabetes, Cardiovascular Diabetology.

# **KNOWLEDGE, ATTITUDE, AND PRACTICE OF MEDICAL STUDENTS TOWARDS EVIDENCE-BASED MEDICINE IN PRIVATE AND PUBLIC MEDICAL COLLEGES OF PESHAWAR**

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## **INTRODUCTION:**

Evidence-Based Medicine is a unique approach taken for an individual patient which is made based on the patient's current health condition, the latest available research, and clinical expertise regarding the patient's condition. To identify the areas of improvement in the EBM implementation, we surveyed medical students in Peshawar about their knowledge of, attitude toward, and practice of EBM.

## **OBJECTIVE(S):**

1. To determine the knowledge, attitude, and practice of medical students regarding EBM.
2. To determine the barriers preventing students from practicing EBM.

## **METHODOLOGY:**

The research design for this study was a cross-sectional study that was carried out in two public medical colleges and two private medical colleges of KPK. The duration of this study was 3 months from July – to October 2021. Random sampling was performed, and 286 participants were involved. Inclusion criteria for this study were 4<sup>th</sup>-year and final-year medical students. The questionnaire was self-reported.

## **RESULTS:**

The respondent's characteristics of 286 participants showed that 44.76% (n=128) were males while 55.24% (n=158) were females. Out of all the respondents, 79.9 % of them had excellent knowledge about EBM. 12.65 % reported an excellent attitude regarding EBM and only 6.3% had an excellent practice of EBM. The most common barrier that was identified was lack of time and lack of role modeling. Our study found that females had a better attitude toward EBM than males (p-value <0.5). There was also a strong relationship between the year of study of respondents and the Practice of EBM, which was greater in final year students (p-value <0.5).

## **CONCLUSION:**

Although the majority of the medical students of KPK have an excellent knowledge of EBM, few of them had an excellent practice which does not necessarily show an excellent attitude either.

## **KEYWORDS:**

Evidence-based medicine, Evidence-based practice, knowledge, attitude, practice, barriers, fresco test.



# **BEHAVIOR TOWARDS FAST FOOD CONSUMPTION AMONG MEDICAL AND DENTAL STUDENTS OF PESHAWAR, PAKISTAN**

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## **INTRODUCTION:**

Eating away from home is becoming increasingly common and visits to fast-food restaurants are growing even more rapidly. Following the modernization of society, fast food has become more than just a portion of food to consume but rather a lifestyle trend. This is particularly observed among students and the need for investigating the behavior has been necessary.

## **OBJECTIVE(S):**

1. To assess the behavior towards fast food consumption and the frequency of fast-food intake in medical and dental students of Peshawar.

## **METHODOLOGY:**

Cross-sectional evaluation of 95 random students from Medical and Dental Colleges of Peshawar. Data were collected in May and June 2021 through an online questionnaire. Collected data were analyzed using SPSS version 20.

## **RESULTS:**

The majority of responders are female 90.5% and those who filled the questionnaire are from urban areas 77.9%. 94.7% of participants enjoy fast food. Pizza is the favorite fast food of 52.6% of participants. 51.6% of participants consumes fast food mostly a few times per month. The deliciousness is the main factor that causes fast food consumption in 72% of the participants. There was a 37.9% of students did not worry about cutting down on fast food. However, 63.2% of students never developed significant distress due to their eating behavior. Moreover, 52.6% of participants think that their fast food eating habit is increasing day by day.

## **CONCLUSION:**

The fast-food consumption rate is high among medical and dental students with a majority not worrying to overview their eating behavior. Hence interventions are needed to orient their attention towards their eating behavior.

## **KEYWORDS:**

Fast foods, behavior, medical and dental students

# KNOWLEDGE, ATTITUDES, PRACTICES, AND AWARENESS TOWARDS MEDICATION USE AMONG HEALTH CARE STUDENTS IN HAMDARD UNIVERSITY.

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## INTRODUCTION:

Self-medicines are also called non-prescription or over-the-counter drugs (OTC). They are defined as "purchasing and consuming drugs or medicines without the advice of any physician or pharmacist, and not without proper diagnosis." This study was conducted to assess the convenience of using self-medication habits at Hamdard University in Karachi, Pakistan for treating minor ailments.

## OBJECTIVE(S):

1. To determine the level of perception and awareness regarding OTC medications, among the students of Hamdard university
2. To determine the effects of certain factors like socio-demographics, personal health and family history of illness, attitudes, and practices regarding OTC drugs, among the Hamdard University students.

## METHODOLOGY:

Oral consented to a self-administered, close-ended, questionnaire to collect data. Statistical Package for Social Sciences (SPSS) version 24 is used to analyze data. To investigate the relationship between understanding, attitude, and practice with self-medication use, chi-square analysis and multivariable logistic regression analysis were used.

## RESULTS:

A total of 300 questionnaires were circulated among university students. Responses were received from 291 giving a response rate of 97%. Female volunteers were 66% (192) whereas male volunteers were 34% (99), mostly falling in the age group of 21-23 (46%).

## CONCLUSION:

Self-medication plays an important role in self-care since its prevalence makes people independent from having to make any decisions regarding their health despite being aware of its harmful effects. World Health Organization also agrees that OTC drugs are mostly used for short-term treatment.

## KEYWORDS:

Self-Medication (SM), Adverse Effect, Over-the-counter (OTC)

# FREQUENCY OF UNDERGRADUATE MEDICAL STUDENTS AT RISK OF DEVELOPING EATING DISORDERS

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## INTRODUCTION:

The stress of medical academics has a significant impact on a student's behavior and mental health, which can manifest in the development of eating disorders (ED). EDs are characterized by severe disturbance in eating behaviors and possess a multifactorial etiology.

## OBJECTIVE(S):

1. To determine the frequency of undergraduate medical students at the risk of developing EDs based on EAT-26 or scoff screening.
2. To identify the relation of EDs with sociodemographic factors (e.g. BMI).

## METHODOLOGY:

An analytical study that also explores associations between eating disorders and other variables using screening tools EAT-26 and scoff questionnaire. 405 participants were recruited by convenient sampling and data was analyzed using SPSS (Statistical Package for Social Sciences) over the course of 3 months.

## RESULTS:

According to the BMI category, the percentage of people falling in the underweight category (<18.5) was 18.64%, those in the healthy weight category (18.5-24.9) was 26.2%, the overweight category (25-29) showed 37.31%, while the category of obesity (>30) was 28.78%. The Chi-square value for BMI categories is 0.001. As P-value is less than 0.005 it shows a significant association between BMI and eating disorders.

## CONCLUSIONS:

In this study, BMI was found to show a significant association with eating disorders. The participants having healthy BMI have displayed a greater propensity to develop eating disorders. Gender, age, and institute had little association. Strategies should be designed to prevent the occurrence of such disorders and aid medical students suffering from them.

## Keywords:

Eating disorders, students, medical, risk

# **A STUDY OF THE HARMFUL EFFECTS OF COSMETICS ON HUMAN HEALTH**

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## **INTRODUCTION:**

Cosmetic is the primary aspect of the human daily lifestyle in all generations and is spread among the people for numerous uses and purposes. Cosmetic products are applied to the body for purpose of beautifying, cleaning, or improving the appearance and increasing attractive features.

## **OBJECTIVE(S):**

1. To assess the cosmetics utilization patterns and self-reported adverse reactions among the general population of Karachi.

## **METHODOLOGY:**

A cross-sectional study was done from January to December 2021 on the general population of 15 to 60 years of age in Karachi. Using a non-probability convenient sampling technique, a pre-tested and structured questionnaire was administered. The cosmetics utilization patterns and self-reported adverse reactions to cosmetics were assessed. Data were analyzed by using SPSS version 24. Frequency tables were used to describe the data.

## **RESULTS:**

Out of a total of 500 participants, (39%) reported side effects related to the use of cosmetics. Most of them are female (70%) and married (72%). Sharing of cosmetics was done by (44%) and (84%) of participants use cosmetics after mixing. The most common side effects are pimples (25%), redness (16.6%), hair loss (16.2%), dryness of skin (15.6%), and allergy (15.4%). Side effects mostly observed from shampoo (16%), cream (14.8%), lotion (11.4%) and foundation (10.8%).

## **CONCLUSION:**

This study revealed that, despite a significant knowledge about cosmetics' adverse effects, a considerable number of people use them on daily basis. This means we need to address this situation as a public health concern and research the concerned issue throughout different cities of Pakistan.

## **KEYWORDS:**

Cosmetic products, side effects, perception, Karachi

# **DISTRIBUTION OF DRUG-SENSITIVE TUBERCULOSIS IN DS-TB POPULATION OF DISTRICT D.I. KHAN, PAKISTAN**

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## **INTRODUCTION:**

Tuberculosis (TB) is the 10th leading cause of death globally. Worldwide in 2018, approximately 10 million people suffered from tuberculosis. Pakistan is a high TB endemic country, standing at 5<sup>th</sup> position in the list of 30 high burden countries (HBC) with an estimated 518 000 TB cases including 15 000 MDR-TB.

## **OBJECTIVE(S):**

1. To determine the distribution of Drug Sensitive (DS)-TB by; Sex, age groups, and type of disease in the DS-TB population of District D.I. Khan, Pakistan.

## **METHODOLOGY:**

This cross-sectional study was conducted in Gomal Medical College, D.I. Khan from January 5, 2021, to January 25, 2021. The data of 3,916 patients were retrieved from District Health Office, D.I. Khan for 2019-2020. Sex, age groups, and type of disease were variables and were analyzed by count and percentage with 95%CI. Three hypotheses were verified by the chi-square goodness-of-fit test.

## **RESULTS:**

Out of 3,916 DS-TB patients, 1,806 (46.12%, 95%CI 44.55-47.67) were men & 2,110 (53.88%, 95% CI 52.32-55.44) women, 299 (7.64%, 95% CI 6.84-8.51) were in age group 0-14 years, 1,948 (49.74%, 95%CI 48.17-51.31) in 15-44, 1,076 (27.48%, 95% CI 26.10-28.89) in 45-64 and 593 (15.14%, 95% CI 14.05-16.30) in 65+years, and 2,877 (73.47%, 95%CI 72.08-74.85%) pulmonary and 1,039 (26.53%, 95%CI 25.14-27.91) extra pulmonary cases. Our observed distribution of DS-TB across sex ( $p<.00001$ ), age groups ( $p<.00001$ ) and type of disease ( $p<.00001$ ) were not similar to expected.

## **CONCLUSIONS:**

Drug-sensitive tuberculosis was more common in women than men. It was highest in the age group 15-44 years and higher for pulmonary TB than extrapulmonary TB.

## **KEYWORDS:**

Tuberculosis, Pulmonary Tuberculosis, Prevalence

# **DELIBERATE SELF-HARM: A SELF-REPORT SURVEY IN MEDICAL COLLEGES OF KHYBER PAKHTUNKHWA**

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## **INTRODUCTION:**

DSH is an action of injuring one-self with full intention of doing so, but these actions do not end person's life. Various methods of self-harm are known, no clear history of self-harm can be identified and its prevalence varies under different circumstances. Important effect of self-harm can lead to suicide. The treatment aims at psycho-social support and avoiding harmful objects

## **OBJECTIVE(S):**

1. To find prevalence of DSH among students of medical colleges of KPK
2. To find the associated factors of DSH in medical colleges of KPK

## **METHODOLOGY:**

Cross-sectional study was organized by asking students from assigned colleges to fill questionnaire derived from ISAS on Google form. SPSS was used to analyze the data. Descriptive statistics were used for frequency, deviation and percentage. Independent t-test was used for analysis of variables.

## **RESULTS:**

Out of 333 responses, 175 were chosen for study. Self-harm prevalence was 12.6%. Common methods were pulling hair and carving (36.4%). Perception of pain remained neutral. Urge to self-harm remained for less than an hour and people were generally alone while doing so. Majority did not remember the age at which they started self-harm. Women scored higher in 10/13 DSH functions.

## **CONCLUSION:**

Urge to self-harm remained for less than an hour until started again. Majority did not remember the age at which they started this. Women make up a major chunk of population in self-harm and also scored higher 10/13 DSH functions. Despite high prevalence of DSH only limited data was found regarding Pakistan and medical colleges. Proper channelization and support groups for DSH victims and prevention are practically non-existent in medical colleges.

## **KEYWORDS:**

Self-harm, prevalence, gender, age

# DISTRIBUTION OF CUTANEOUS LEISHMANIASIS BY DEMOGRAPHIC CHARACTERISTICS IN DISTRICT D.I. KHAN, PAKISTAN

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## INTRODUCTION:

Cutaneous leishmaniasis is a parasitic infection caused by a parasite of the genus *Leishmania*. Commonly, it is a zoonotic disease transmitted via sandflies of the genus *Phlebotomus*. The disease itself is widely distributed globally.

## OBJECTIVE(S):

1. To determine the distribution of cutaneous leishmaniasis by; Sex, age groups, and residence in District D.I. Khan, Pakistan.

## METHODOLOGY:

This cross-sectional study was conducted in Gomal Medical College, D.I. Khan from January 1, 2021, to January 23, 2021. The data was retrieved from District Health Office, D.I. Khan. A sample size of 419 was calculated from the population at risk of 1,750,000. Sex, age groups, and residence were three nominal variables. Distribution was analyzed by count and percentage with 95%CI. Three hypotheses for distribution were testified by the chi-square goodness-of-fit test.

## RESULTS:

Out of 419 positive cases, 269 (64.20%) were men & 150 (35.80%) women, and 254 (60.62%) were in age group  $\leq 19$  years, 101 (24.11%) in 20-39 & 64 (15.27%) in  $\geq 40$  years, and 113 (26.97%) were urban & 306 (73.03%) rural. Our distribution by sex ( $p=0.01327$ ), age groups ( $p<0.0001$ ) and residence ( $p<0.0001$ ) were not similar to expected.

## CONCLUSION:

Prevalence of cutaneous leishmaniasis in District D.I. Khan, Pakistan was higher in men than women, highest in age group  $\leq 19$  years than other age groups, and higher in rural than urban. Prevalence for men was higher than expected and vice versa for women. Prevalence for the age group  $\leq 19$  years was highest than expected than other age groups. Prevalence for rural was higher than expected and vice versa for urban.

## KEYWORDS:

Cutaneous Leishmaniasis, *Leishmania donovani*, skin, distribution, sex, age groups, residence.

# COMPARISON OF BODY IMAGE ACCORDING TO ACTUAL BODY MASS INDEX OF GENERAL POPULATION

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## INTRODUCTION:

Obesity is a worldwide problem that renders risk to health. There is a rising load of obesity in Pakistan. People's perception of their weight status is an important issue. Many people fail to perceive accurately as being overweight or obese.

## OBJECTIVE(S):

1. To compare the subjective feeling of being obese and non-obese with their calculated BMI
2. To determine the willingness to lose body weight among obese and overweight perceivers.

## METHODOLOGY:

It was a cross-sectional study carried out at Shalamar medical college Lahore. A total of 403 adults ( $\geq 18$  years) participated in the study. A convenient sampling technique was used to recruit the participant. SA self-administered questionnaire was distributed, height and weight were recorded and BMI was calculated. Data were analyzed by SPSS version 24.

## RESULTS:

A total of 403 subjects with a mean age of  $36 \pm 0.71$  were included in the study. Two hundred and twenty-three subjects had  $BMI > 25$  (Asian criteria for obesity). In this obese group, 61% were able to recognize themselves as obese but 39% of people didn't consider themselves obese. Out of obese perceivers, 87% showed their willingness to lose weight. Males (78%) were found to be less accurate in their perception of their body image as compared to females (22%). Subjects (64%) more than 40 years of age were accurate in their perception of their body image

## CONCLUSION:

More than one-third of the obese subjects according to the BMI were unable to perceive themselves as obese. The majority of obese people were willing to lose weight.

## KEYWORDS:

Body mass index, obese, non-obese, overweight, body image



# ATTITUDE AND REACTIONS OF PRIVATE MEDICAL STUDENTS TO THE DISSECTION HALL

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## INTRODUCTION:

Attending classes in the dissection hall is an essential part of learning anatomy. MBBS students undergo mental stress while dealing with a cadaver. There are emerging concerns about the negative consequences of cadaver dissection on medical students.

## OBJECTIVE(S):

- 1 To determine the reaction and attitudes of MBBS students on first exposure to the cadaver in anatomy dissection hall.

## METHODOLOGY:

It was a cross-sectional study carried out at Shalamar Medical and Dental College, Lahore from October to December 2019. A total of 272 MBBS students participated in the study. Convenience sampling was done to collect the data. Written informed consent was taken before filling out the form; a self-administered questionnaire was distributed and completed by using the Google doc form. Frequencies and percentages were calculated. Statistical analysis was carried out by SPSS version 20.

## RESULTS:

It was observed that 75% of the students were able to bear the smell in the dissection hall. The first response upon seeing the cadaver was variable; 28% felt sympathy, 27% felt excited, 19 % felt apprehensive, 17% felt anxious and 9% were saddened. Some (40%) of the students had fear of getting an infection. Few students (6%) feared touching a cadaver due to the feeling of being murdered and suicide. Only 7% of students had sleeping problems. 78% of students had watering eyes, 9% had nasal congestion and 2% had a cough on the first exposure whereas 11% of students didn't suffer from any of these symptoms.

## CONCLUSION:

The negative consequences of cadaver dissection on medical students are far less than its importance in learning anatomy.

## KEYWORDS:

Students, medical, dissection.

# LEVEL OF ANXIETY AND DEPRESSION AMONG FAMILY CAREGIVERS IN HOSPITALIZED COVID-19 POSITIVE PATIENTS

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## INTRODUCTION:

Covid-19 is one of the major health problems around the globe in terms of its morbidity and mortality. Mental health is becoming an issue during the Covid-19 pandemic which can't be ignored in our fight against it. This study aimed to explore the prevalence and factors linked to depression and anxiety in hospitalized patients' family caregivers.

## OBJECTIVE(S):

- 1 To determine the frequency of depression and anxiety among family caregivers in hospitalized COVID 19 Positive Patients in Public Sectors Tertiary Care hospitals of district Peshawar.

## METHODOLOGY:

This descriptive cross-sectional study was conducted from 1st September 2021 to 31st December 2021 at tertiary care hospitals in District Peshawar, KPK. A total of 255 family caregivers diagnosed with covid-19 were included in this study using a convenient sampling technique. We assess depression and anxiety symptoms using the Hospital Anxiety and Depression Scale (HADS), and statistical package for the social sciences (SPSS) among patients at admission. Data were analyzed through SPSS software version 25.0.0.0, 2022.

## RESULTS:

Out of (n=255) participants, 36.9% and 24.7% of patients' family caregivers (FGC), with Covid-19 had symptoms of anxiety and depression, respectively. The prevalence of anxiety has a significant association with income (low income) ( $p=.002$ ). Depression was significantly higher in illiterate people as compared to educated  $P=.002$ .

## CONCLUSION:

Our study demonstrated the high prevalence of anxiety and depression in family caregivers, which requires swift and comprehensive attention from concern.

## KEYWORDS:

Anxiety, Depression, Patients, Family caregivers, COVID-19.

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

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## INTRODUCTION:

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

## OBJECTIVE(S):

1. To investigate the prevalence of residual symptoms in Covid-19 survivors,
2. To identify groups within the population at a high risk of presenting with residual symptoms,
3. To identify factors associated with a low QoL score.

## METHODOLOGY:

An anonymous online survey was administrated in Pakistan from November 2020 to April 2021 to 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 to 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:

Quality of life, COVID-19

# THE MYSTERY OF COVID-19 REINFECTIONS: A GLOBAL SYSTEMATIC REVIEW AND META-ANALYSIS OF 577 CASES

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## INTRODUCTION:

As the COVID-19 pandemic rages on, reports on disparities in vaccine rollout alongside reinfection and reactivation from previously recovered cases have been emerging. With newer waves and variants of COVID-19, we conducted a systematic review to assess the determinants and disease spectrum of COVID-19 reinfection.

## OBJECTIVE(S):

1. As the COVID-19 pandemic rages on, reports on disparities in vaccine rollout alongside COVID-19 reinfection have been emerging.
2. We conducted a systematic review to assess the determinants and disease spectrum of COVID-19 reinfection

## METHODOLOGY:

A comprehensive search covering relevant databases was conducted for observational studies reporting Polymerase Chain Reaction (PCR) confirmed infection and reinfection cases. A quality assessment tool developed by the National Institute of Health (NIH) for the assessment of case series was used. Meta-analyses were performed using RevMan 5.3 for pooled proportions of findings in first infection and reinfection with a 95% confidence interval (CI).

## RESULTS:

81 studies reporting 577 cases were included from 22 countries. The mean age of patients was  $46.2 \pm 18.9$  years with males accounting for 45.8% of the study population while 179 (31.0%) cases of comorbidities were reported. The average time duration between first infection and reinfection was  $63.6 \pm 48.9$  days. During first infection and reinfection, fever was the most common symptom whilst anti-viral therapy was the most common treatment regimen administered. A higher Intensive Care Unit (ICU) admission rate was observed in reinfection compared to first infection (10 vs 3). 10 deaths were reported with 565 patients fully recovering. Respiratory failure was the most common cause of death (7/10 deaths). 72 studies were determined to be of good quality whilst nine studies were of fair quality.

## CONCLUSION:

As the first global-scale systematic review of its kind, our findings support immunization practices given increased ICU admissions and mortality in reinfections. Our cohort serves as a guide for clinicians and authorities in devising an optimal strategy for controlling the pandemic.

## KEYWORDS:

COVID-19, Vaccines, antiviral therapy

# **GAUGING THE RISK FACTORS FOR ASYMPTOMATIC BACTERIURIA IN TYPE-2 DIABETIC WOMEN: A CASE-CONTROL STUDY**

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## **INTRODUCTION:**

After the discovery of multisystem inflammatory syndrome associated with SARS-CoV-2 in children (MIS-C) was made, similar cases have emerged in the adult population.

## **OBJECTIVE(S):**

- 1 To analyze the risk factors, clinical course, and prognosis of the multisystem inflammatory syndrome in adults (MIS-A).

## **METHODOLOGY:**

A comprehensive literature search was conducted using several databases for cases reporting MIS-A from December 1st, 2019, to September 9th, 2021. The case definitions used to classify potential cases were those recommended by the World Health Organization, Center for Disease Control (CDC), and individual country/physician classification. The meta-analysis was performed using Comprehensive Meta-Analysis 2.2.027 and RevMan 5.4.1, employing 95% confidence intervals (CI).

## **RESULTS:**

Seventy studies were assessed for full-text eligibility, out of which 38 studies were finally included. The mean age of included study population was  $32.0 \pm 9.9$  years. The most common symptoms reported were fever (87.5%, 95% CI: 76.0%-93.9%), and diarrhea (48.2%, 95% CI: 35.5%-61.1%) with ventricular tachycardia (58.9%, 95% CI: 45.7%-71.0%) commonly reported on electro-cardiac assessment. The most common inflammatory marker was elevated C-Reactive protein (78.6%, 95% CI: 65.9%-87.4%). Abnormal echocardiogram was the most common imaging test result, while steroids were the most administered treatment. Severe cases had a higher need for inotropic and antibiotic therapy compared to the non-severe cases. One death was reported due to cardiovascular failure.

## **CONCLUSION:**

The findings suggest that MIS-A is a serious hyperinflammatory condition, albeit similar to symptoms similar to MIS-C, but might require specialized medical therapies if severe. Our collated findings will help clinicians identify the typical presenting symptoms and optimal management of MIS-A. Further research is required to understand the long-term prognosis and the correlation between COVID-19 and MIS-A to understand its pathogenesis and clinical spectrum.

## **KEYWORDS:**

Multisystem, Inflammation, COVID-19, SARS-CoV-2

# **KNOWLEDGE OF PROPER INVESTIGATION AND DIAGNOSIS OF CHILDREN PRESENTING WITH DIFFERENT PATTERNS OF ABDOMINAL MASSES**

**Amna Malik, Rubaid Azhar Dhillon**

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## **INTRODUCTION:**

An abdominal mass in a neonate, infant, or child is something that every clinician needs to be aware of as these masses can sometimes indicate malignancy.

## **OBJECTIVE(S):**

1. The outcome of this study would give an overview to the pediatric surgeons/ urologist about presenting a spectrum of abdominal masses in children in our population which would enable them to manage these patients properly.

## **METHODOLOGY:**

This descriptive cross-sectional study included ninety-four (n=94) patients of less than 12 years of age irrespective of either gender who presented with an abdominal mass. Patients suspected of having abdominal mass were screened from the outpatient (OPD) and emergency departments.

## **RESULT:**

The male to female ratio was 2.24:1. Thirty-five (37.33%) children were less than 1-year-old, twenty-six (27.66%) were between ages 1 and 3 years, nineteen (20.12%) children were between ages 3 to 7 years and fourteen (14.89%) children were elder than 7 years of age. Most of the masses are benign and cystic in nature, however, Wilms' tumor and neuroblastoma are two conditions that need vigilant monitoring as these are the two malignant tumors (22.34%: n=21) in children where they usually present with an abdominal mass.

## **CONCLUSION:**

In a nutshell, any child presented with abdominal symptoms in the surgical department must be investigated and managed accordingly. Any delay in diagnosis may cause a fatal outcome.

## **KEYWORDS:**

Abdominal mass, ureteropelvic junction obstruction, vesicoureteric reflux, Hydronephrosis, posterior urethral valve.

# **ORAL HYGIENE PRACTICES AND DENTAL CARIES PREVALENCE IN UNDERPRIVILEGED GIRLS AND BOYS OF MADRASSA- ABBOTTABAD, KPK, A CROSS-SECTIONAL SURVEY**

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## **INTRODUCTION:**

According to “World Health Organization” 3.5 billion people suffer from oral diseases. Caries and gum diseases can be prevented via early diagnosis, timely treatment, and good oral hygiene practices.

## **OBJECTIVE:**

1. To determine Oral Hygiene Status and frequency of dental caries in students of local Madrassahs in Abbottabad, KPK.

## **METHODOLOGY:**

A cross-sectional survey was conducted during Community Outreach activities planned by the department of community dentistry, Abbottabad International Dental College. Students of two local Madrassahs were examined. Data regarding Oral hygiene status, DMFT, and Orthodontic treatment need were recorded on a structured Performa. Data analysis was carried out by using SPSS version 25.

## **RESULTS:**

A total of 101 students (62.4% female- 37.6% male) aged 3-21 years were examined. 86.1% of participants were performing toothbrushes once daily while 82% of students were found to have a daily intake of sugary stuff. Only 20% of students have had the experience of visiting a dentist in past. DMFT scores ranged from 1 to 10 in 70% of the students while only 30% of students were found without caries. Females were found to have more carious teeth in comparison to males.

## **CONCLUSION:**

The present study found poor oral hygiene, carious teeth, and malocclusion among students. There is a dire need to plan a preventive oral health program to reduce the cost and complications of the curative treatment afterward.

## **KEYWORDS:**

Caries, Oral Hygiene, DMFT, Orthodontic treatment,

# OSTEOPOROSIS KNOWLEDGE AND SELF-EFFICACY IN UNDERGRADUATE UNIVERSITY STUDENTS OF LAHORE PAKISTAN

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## INTRODUCTION:

Osteoporosis is a global health problem with a male to female ratio of 1:4. It is a systemic skeletal disorder characterized by decreased bone mineral density and an increased risk of bone fractures.

## OBJECTIVE(S):

1. Evaluate knowledge and awareness of osteoporosis and also assess gender predisposition of osteoporosis self-efficacy among university students in Lahore, Pakistan.

## METHODOLOGY:

It was a cross-sectional study conducted on undergraduate university students in Lahore, Pakistan after approval from IRB with a sample size of 404. Convenient sampling was used for data collection. Knowledge of osteoporosis was assessed using a validated Osteoporosis Knowledge Assessment Tool (OKAT) and self-efficacy using Osteoporosis Self Efficacy Scale (OSES). The data were analyzed using SPSS software. Frequencies and percentages of knowledge and self-efficacy of osteoporosis were calculated.

## RESULTS:

In this research, the mean age of participants was  $21.26 \pm 2.48$  years, of which 67.8% were females. The results indicate that 90.1% of participants had knowledge about what osteoporosis is and 71.8% considered it to be more common in women than men. Whereas 28.7% and 23.8% of participants didn't know that higher peak bone mass in childhood and exercise reduces the risk of osteoporosis respectively. Moreover, 6.4% and 12.4% of the participants strongly agreed that they can begin a new exercise program and stick to a diet with adequate calcium respectively.

## CONCLUSION:

Participants had knowledge about Osteoporosis but were not aware of the factors and there was a lack of readiness to adopt these factors to prevent osteoporosis likely due to people not knowing the seriousness of osteoporosis and that both genders can have the disease.

## KEYWORDS:

Osteoporosis, Osteoporosis Knowledge Assessment Tool (OKAT), Osteoporosis Self Efficacy Scale (OSES)



# RELATIONSHIP OF NEUROTICISM AND EMOTIONAL INTELLIGENCE WITH BURNOUT IN MEDICAL STUDENTS

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## INTRODUCTION:

Literature shows that medical students with neuroticism traits were more vulnerable to developing burnout. Neuroticism is generally characterized by a tendency to experience negative feelings and is linked with emotional instability, distress, moodiness, irritability, poor coping ability, and sadness. Emotional intelligence (EI), is a combination of perceiving and understanding emotions, using emotions to formulate thoughts, and managing emotions. Burnout is a syndrome of emotional exhaustion, depersonalization, and a low sense of personal accomplishment that eventually leads to detrimental consequences to mental health and psychological function.

## OBJECTIVE(S):

1. To determine the frequency of neuroticism, low EI, and burnout in medical students.
2. To find out the relationship between neuroticism and low EI with a burnout in medical students.

## METHODOLOGY:

A cross-sectional study was conducted, and a purposive sampling method was applied. Validated questionnaires were administered to measure Burnout, Emotional intelligence, and neuroticism. A descriptive analysis of the demographic data was performed using SPSS version 25 and the Pearson coefficient was applied.

## RESULTS:

The frequency of neuroticism and burnout was quite high among medical students. Neuroticism increased psychological distress, thereby contributing to increased burnout. The results also identified that EI was significantly reduced by psychological distress and neuroticism, indicating both were negative predictors of EI, which suggests that psychological distress and neuroticism increased burnout levels and reduce EI levels.

## CONCLUSION:

The results revealed that neuroticism significantly increased burnout levels, while EI had a significant direct effect on reducing burnout.

## KEYWORDS:

Emotional intelligence, burnout, neuroticism, medical students

# DISTRIBUTION OF DR-TB BY SEX, AGE GROUPS, AND OCCUPATION IN THE DR-TB POPULATION OF D.I. KHAN DIVISION, PAKISTAN

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## INTRODUCTION:

Pakistan is the 5th high-prevalent country for TB and 5th for DR-TB, with estimated TB incidence, prevalence, and mortality of 267/100,000, 341/100,000, and 27/100,000 population respectively, with 525,000 annual incident TB cases. Globally in 2018, about 3.4% of new TB cases and 18% of previously treated cases had MDR/RR TB.

## OBJECTIVE(S):

1. To determine the distribution of DR-TB by; Sex, Age group, and Occupation in the R-TB population of D.I. Khan Division, Pakistan.

## METHODOLOGY:

This cross-sectional study was conducted in Gomal Medical College, D.I. Khan, Pakistan from January 10, 2020, to February 16, 2020. 286 DR-TB patients were selected from PMDT Center, MMM Teaching Hospital, D.I. Khan from October 2013 to December 2019. Sex, age groups, and occupation were variables and described by count and percentage with 95%CI. Hypotheses were substantiated by the chi-square goodness-of-fit test.

## RESULTS:

Out of 286 DR-TB patients, the prevalence of DR-TB was higher in women 163 (57%) than in men 163 (57%). It was highest at 172 (60.14%) in the age group 15-45, followed by 106 (37.06%) in  $\geq 45$  and 8 (2.80%) in 0-14 years. It was highest among housewives 148 (48.95%), followed by laborers 113 (39.51%) and office workers 133 (11.54%). The observed prevalence by occupation was similar to expected ( $p=.7354$ ), while it was different than expected for sex ( $p=.0006$ ) and age groups ( $p<.0001$ ).

## CONCLUSION:

Prevalence of DR-TB was higher in women, age group 15-44 years, and housewives. The observed prevalence by occupation was similar to expected, while it was different for sex and age groups in the DR-TB population of D.I. Khan Division, Pakistan.

## KEYWORDS:

Tuberculosis, pulmonary tuberculosis, drug-resistant tuberculosis, multidrug-resistant tuberculosis, extensively drug-resistant tuberculosis, drug resistance, and multidrug resistance.

# **BACTERIAL CONTAMINATION OF BLOOD PRESSURE CUFF USED IN PUBLIC-PRIVATE HOSPITALS IN KARACHI**

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## **INTRODUCTION:**

Blood pressure (BP) cuffs are commonly used in hospitals, but they are rarely disinfected, making them a potential source of nosocomial infection transmission to patients.

## **OBJECTIVE(S):**

1. To detect the presence of bacterial colonization on BP cuffs of public and private hospitals in Karachi.
2. To find out the awareness and practices of health care workers (HCW) for BP cuffs as a source of infection.
3. To ascertain the efficacy of ethanol-based solution for the disinfection of BP cuffs.

## **METHODOLOGY:**

A cross-sectional study was conducted in 2021. A total of 100 samples from BP cuffs were randomly collected from different units of private and public sector hospitals. The swabs were streaked onto blood agar. Routine microbiological tests were done for the isolation of bacteria. Twenty-five samples were chosen at random for pre and post-disinfection with ethanol. A questionnaire was given to HCWs while the samples were being collected. SPSS 24 was used to analyze the data. Frequencies and percentages were tabulated. For categorical variables, the Chi-square test was used and  $P < 0.05$  was considered statistically significant.

## **RESULTS:**

Microbial growth was found in 21% samples of the 100 collected, 17% and 4% in private and public sector hospitals respectively. Methicillin-Resistant Staphylococcus aureus was found in 12 of 21 samples in private sector hospitals. Ethanol was found to be an effective disinfectant in 99% of stained samples. BP cuff was identified as a source of fomite by 17% of health care workers interviewed, 30% agreed it was a source of infection while 78% denied having any cleaning protocol for BP cuffs in hospitals.

## **CONCLUSION:**

The study establishes BP cuffs as a source of resistant bacterial strains. Contamination BP cuffs can lead to infections in Karachi, a densely populated city in Pakistan where personal hygiene is generally not followed. Handwashing practices and disinfecting protocols should be employed to minimize the spread of disease.

## **KEYWORDS:**

Blood pressure, cuff, contamination, nosocomial, ethanol.

# PREVALENCE OF ABO AND RH BLOOD GROUPS IN STUDENTS OF GOMAL MEDICAL COLLEGE, D.I. KHAN, PAKISTAN

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## INTRODUCTION:

The blood group of an individual is commonly determined by ABO & Rh status. ABO & Rh systems of blood grouping are based on the presence or absence of antibodies & antigens substances on the surface of red blood cells.

## OBJECTIVE(S):

1. To determine the prevalence of ABO and Rh blood groups in students of Gomal Medical College, D.I. Khan, Pakistan.

## METHODOLOGY:

This cross-sectional study was conducted in Gomal Medical College, D.I. Khan, Pakistan from April 01 to May 23, 2019. All the 452-student population of GMC, D.I. Khan was eligible. A structured Performa was used to collect data from students through self-reporting. Sex, ABO (A, B, AB & O) and Rh (positive and negative) blood groups were nominal variables and were described by count and percentage with 95%CI. The observed versus expected prevalence of ABO and Rh groups were tested by the chi-square goodness-of-fit test.

## RESULTS:

Out of 452 students, 292 (64.6%) were boys and 160 (35.4%) girls. Prevalence of blood group A was 127 (28.12%), B 165 (36.53%), AB 57 (12.62%) and O was 103 (22.73 %). Prevalence of blood group Rh+ was 408 (90.33%) and Rh- 44 (9.67%). The observed prevalence of the ABO blood group was significantly different ( $p < .00001$ ), whereas of Rh blood group was similar to their expected prevalence ( $p = .50769$ ).

## CONCLUSION:

The most prevalent ABO blood group was B and Rh was Rh+ in students of Gomal Medical College, D.I. Khan. Awareness of blood groups will guide the effective management of blood banks/ listing of volunteer blood donors.

## KEYWORDS:

Blood Groups, ABO Blood-Group System, Rhesus Blood-Group System, Medical Students, Blood Banks.

# **INCIDENCE OF ACNE IN KPK ADOLESCENTS AND YOUTHS MALE VS FEMALE**

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## **INTRODUCTION:**

Acne is a common chronic disorder affecting the hair follicle and sebaceous gland, in which there is expansion and blockage of the follicle and inflammation. The hallmark is a comedone closed (whitehead) or open (blackhead) in which the color is due to melanin. Peak incidence is 13-16 years' range is 8-40).

## **OBJECTIVE(S):**

1. The main purpose of this study was to find a difference if any in the incidence of acne in KPK youths male vs. female as well as the average age associated with the onset of acne and severity of acne.

## **METHODOLOGY:**

We performed a cross-sectional incidence report and collected data from 102 patients with acne to find out the male vs female ratio of incidence as well as the average age affecting males and females. They were divided into groups based on their age, sex, and spread of acne across their bodies. The study was carried out from 11<sup>th</sup> Jan 2022 till 23 Feb 2022.

## **RESULTS:**

The results indicated that females were more affected by acne than males, onset in females was also earlier but the severity and spread was noted to be more. The gender ratio revealed that 58% of patients were female while the remaining 42% were male. The spread of acne was as follows: 64% was confined to the face, 15% to the truncal region, and 21% to both trunk and face

## **CONCLUSIONS:**

After this study, we can conclude that females were more affected by acne as compared to males and the spread of acne was revealed to be more confined to the face and trunk. Males were revealed to have more incidence of truncal acne than females.

## **KEYWORDS:**

Comedone, Sebaceous gland, Closes/Open comedones, acne.

# METHODS TO PREVENT MISTING IN SPECTACLES ON WEARING MASK COVID-19

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## INTRODUCTION:

Misting of spectacles is a phenomenon where condensation occurs in which water vapors from warm breath fall on a cooler surface of spectacle lenses. We used two methods to reduce misting which are the soapy water method and the button method.

## OBJECTIVE(S):

1. To assess the effectiveness of different techniques in misting spectacles while wearing a mask.
2. To find a cost-effective and easy solution to prevent fogging of spectacles.

## METHODOLOGY:

This comparative cross-sectional study design was carried out from September 2021 to May 2022 at The University of Faisalabad and Madinah Teaching Hospital, Faisalabad. A total of 60 patients of both males and females were included. The age group of 18-28 years of both genders was included through a convenient sampling technique. The soapy water technique was applied to group A, the button technique was applied to the B group, and the outcomes of both groups were compared. Data analysis was done by independent t-test with a statistical package for social sciences (SPSS version 20).

## RESULTS:

Both the mean values for the soapy method and button method were compared for which the p-value was found to be ( $p=0.000$ ). This p-value indicated that the result is significant.

## CONCLUSION:

This study showed that the soapy water method is more effective than the button method as results showed an increase in visual acuity and contrast sensitivity by the soapy water method.

## KEYWORDS:

Spectacles, fogging, condensation.

# **PREVALENCE OF CATARACTS ATTRIBUTABLE TO BIOMASS FUEL**

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## **INTRODUCTION:**

A cataract is opacification or clouding of the normally clear lens of the eye. It is unclear the passage of light through the lens to the retina of the eye. Biomass is the amount of living matter, plant materials, and animal waste used mainly as a source of fuel.

## **OBJECTIVE(S):**

1. To check the prevalence of cataracts in women using biomass fuel for cooking in rural areas.
2. To identify asymptomatic conditions of the eye associated with biomass fuel.

## **METHODOLOGY:**

This cross-sectional study design was carried out from September 2021 to May 2022 at LRBT Shahpur Sadar Sargodha. A total of 150 female patients were included. The age group of 20 to 40 years was included through a convenient based sampling technique. Data analysis was done by descriptive statistics with SPSS version 20.

## **RESULTS:**

The p-value was found to be ( $p=0.000$ ). This p-value indicates that the result is significant.

## **CONCLUSION:**

The study showed that there is an increased prevalence of cataracts with the use of biomass fuel in rural areas.

## **KEYWORDS:**

Biomass, cataract, ophthalmoscope, cross-sectional study.

# CAFFEINE INTAKE AND ITS EFFECTS OVER AC/A, NEAR POINT OF CONVERGENCE, AND READING SPEED

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## INTRODUCTION:

Caffeine (1,3,7-trimethylxanthine) is the most consumed psychoactive stimulant in the world. It is found in coffee, tea, carbonated drinks, energy drinks, gums, cocoa, etc. Its impact on ocular structures and physiological functions has been seen such as in pupil dilation, raise in IOP and increase in accommodation.

## OBJECTIVE(S):

1. To assess the effect of caffeine on AC/A ratio, NPC before and after caffeine intake.
2. To assess the effect of caffeine on reading speed before and after caffeine intake.

## METHODOLOGY:

A descriptive cross-sectional study design was used. 80 female emmetrope subjects were selected whose ages ranged from 18-26 years old and consumed caffeine. The duration of the study was September 2021 to May 2022 and the area of study was The University of Faisalabad. A convenient sampling technique was applied. Prism bar, Maddox rod, pen torch, trail frame, Royal Air Force ruler, and Times New Roman N10 print were data collection tools. AC/A ratio and NPC were assessed by heterophoria method and RAF ruler also, and the reading speed was assessed by N10 print. Subjects were given 100mg of caffeine in the form of coffee and then AC/A ratio, NPC, and reading speed were assessed at 30 minutes, 60 minutes, and 90 minutes. Data were analyzed by repeated measure ANOVA with SPSS version 20.

## RESULTS:

Caffeine intake showed a significant decrease in AC/A ratio ( $M=4.27$ ,  $SD= \pm 1.16$ ), NPC ( $M=10.27$ ,  $SD= \pm 4.78$ ), and reading speed ( $M=159.71$ ,  $SD= \pm 21.77$ ) as compared to their respective mean baseline values. This study showed a marked significant outcome with  $P < 0.05$ .

## CONCLUSION:

This study concluded that AC/A ratio, NPC, and reading speed were reduced after caffeine intake.

## KEYWORDS:

AC/A ratio, Caffeine, Near Point of Convergence (NPC), Reading Speed.



# **TOPICAL PERIOcular USE OF CASTOR OIL IN THE MANAGEMENT OF BLEPHARITIS**

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## **INTRODUCTION:**

Blepharitis is an ophthalmic condition of inflammation of the eyelid margin associated with dry eye symptoms. It can affect any age group and can associate with a few systemic diseases like rosacea and Seborrheic dermatitis. Untreated blepharitis causes madarosis, trichiasis, and poliosis.

## **OBJECTIVE(S):**

1. To evaluate the effect of castor oil in the management of blepharitis.

## **METHODOLOGY:**

The cohort study was conducted in which 50 subjects of blepharitis were taken between the ages of 20-35 years old and were selected through the non-probability purposive sampling technique. This study was carried out from September 2021 to May 2022 at The University of Faisalabad and Madinah Teaching Hospital Faisalabad. Informed consent was taken from patients before the study. Data was collected through well-structured Performa. The blepharitis patients were taken through a comprehensive slit lamp examination. After examination, the diagnosis of blepharitis was confirmed. Instruct the patient to apply castor oil topically and then revisit after 15 days. Data analysis was done by using descriptive statistics through SPSS software.

## **RESULTS:**

The result of the study showed that reduction of symptoms such as inflammation (99%), redness (96%), sickness (94%), crust (92%), watering (95), and irritation (95%).

## **CONCLUSION:**

The study concluded that significant improvement occurred in the symptoms of blepharitis. It clarified that castor oil is effective in the management of blepharitis.

## **KEYWORDS:**

Blepharitis, Meibomian glands, castor oil, dry eye syndrome.

# 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 in inappropriate ways of earning their livelihood; including beggary and sex work.

## OBJECTIVE(S):

1. Determine the frequency of transgenders who faced any form of violence and suicidal ideation.
2. Investigate the association between transgender victimization and risky behaviors, like suicidal ideation.

## METHODOLOGY:

A cross-sectional study conducted over a period of 7 months included a sample of 196 transgenders living in twin cities. Sampling was done through the snowball sampling technique. Transgenders of age greater than 18 were included. A combined questionnaire was used to estimate the high-risk behaviors. Data was entered on SPSSv22. Descriptive statistics were applied. Multivariate logistic regression was used to explore the competing outcomes associated with suicidal behavior 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 the provision of commercial sex services. The prevalence of suicide ideation was comparatively higher, i.e. 39% however, the 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 behaviors 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 conduct to make a living. It is, therefore, necessary to promote a healthy accepting environment and to reduce gender-based discrimination.

## KEYWORDS:

Transgender, institutional discrimination, suicide.

# **A STUDY ON AWARENESS OF HEALTH CARE PROFESSIONALS REGARDING FIVE MOMENTS OF HAND HYGIENE**

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## **INTRODUCTION:**

Health care professionals are regularly contaminated with pathogens, a major route of transmission throughout the hospital environment and a severe threat to patients as well.

## **OBJECTIVE(S):**

1. To determine and compare the level of awareness of health care professionals regarding WHO's five moments of hand hygiene.

## **METHODOLOGY:**

A descriptive study was conducted on 350 health care professionals at Two Tertiary Care Hospitals of Peshawar from 10th March to 11th April- 2022. Ethical approval was taken with informed consent from the participants. Health care professionals were included in the study present on that day and sick, absent and not agreed were excluded from the study. A well-structured questionnaire was used to collect the data and SPSS Version- 25 was used to analyze data with frequency and percentages.

## **RESULTS:**

Among the total 350 respondents, 55% (n= 194) were male and 45% (n= 156) females. Health care professions included 78% doctors, out of which 61% were house officers; 8.3% were training medical officers, and 9.7 medical officers with 22% were nurses. The knowledge of the five moments among the health care staff was 94.3 % (n= 330). The hand hygiene awareness among the study participants before touching a patient was 88.3%, 88% after touching a patient, 88 % before a procedure, 90 % after a procedure, and 74 % after touching a patient's surroundings.

## **CONCLUSION:**

Health care professionals were adequately equipped with knowledge of WHO- 5 Moments of Hand Hygiene, which can be attributed to the COVID- 19 pandemic protocols that were strictly followed.

## **KEYWORDS:**

Health care professionals; Awareness; WHO- 5 moments of Hand Hygiene.

# ASSESSMENT OF NUTRITIONAL STATUS, DIETARY PATTERNS, AND PHYSICAL ACTIVITY REGIMENS AMONG UNDERGRADUATE MEDICAL STUDENTS

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## INTRODUCTION:

Proper dietary patterns and habits are one of the most important factors shaping our health, as they influence people's physical and mental state and play an essential role in maintaining a healthy body mass index. The poor dietary patterns among undergraduate medical students have been reported as a lifestyle challenge, they face while in medical school.

## OBJECTIVE(S):

1. To assess the nutritional status, dietary patterns, and physical activity Regimens of the undergraduate medical students at Northwest School of Medicine, Peshawar (NWSM).

## METHODOLOGY:

A Cross-sectional study was conducted approximately in 6 Months duration (2021) among 218 undergraduate medical students at NWSM. Non-probability Convenience Sampling technique was applied. Data were gathered via measuring tape, weight scale, and structured questionnaires and were analyzed using descriptive statistics (SPSS V.26).

## RESULTS:

The mean Body Mass Index was  $22.635(\pm 3.7835)$ , 29(13.3%) underweight, 141(64.7%) normal, 41(18.8%) overweight, and 7 (3.2%) obese. Dietary analyses revealed that 78 preferred carbohydrates, 128 preferred proteins, and 12 preferred fatty food. A total of 152 had a high level of physical activity, while 66 had a low level. Furthermore, an association between physical activity and BMI ( $P= 0.049$ ) ( $\chi^2= 7.863$ ) was also found.

## CONCLUSION:

The overall nutritional status and dietary patterns were satisfactory among medical students of NWSM, and they follow a healthy lifestyle with proper physical activity and a nutritious diet.

## KEYWORDS:

Nutritional status, Diet, Physical Activity, Body Mass Index.

# **EVALUATING KNOWLEDGE, AWARENESS, AND PERCEPTIONS AMONG GENERAL PAKISTANI POPULATION REGARDING COVID-19 VACCINATION: AN ONLINE SURVEY-BASED STUDY**

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## **INTRODUCTION:**

The COVID-19 pandemic has significantly affected human lives, globally. To contain the pandemic, vaccination against COVID-19 infection is claimed to be one of the major solutions. Survey-based studies assess to what extent the general public is willing to accept COVID-19 vaccines

## **OBJECTIVE(S):**

1. To evaluate the willingness to accept COVID-19 vaccines and the KAP of COVID-19 vaccines in Pakistanis.
2. To determine the reasons behind the participants' vaccination refusal/hesitation.

## **METHODOLOGY:**

A cross-sectional online survey-based study was conducted among the Pakistani population. A self-validated questionnaire was used to assess their knowledge, attitude, and intentions toward COVID-19 vaccination. A chi-square test was used to compare the vaccine acceptance among different groups within the sociodemographic.

## **RESULTS:**

A total of 962 participants (61% males and 39% females) participated with the majority of participants aged 18-25. Of the study participants, 74% (n=712) were willing to be vaccinated against COVID-19. In comparison to females, males were significantly more willing to be vaccinated. The educational background was significantly associated ( $P < 0.05$ ) with vaccine acceptance. Moreover, participants having a personal or family history of COVID-19 infection were more willing to receive the vaccine.

## **CONCLUSION:**

Participants had good knowledge of the vaccine's effectiveness, side effects, recommended doses, and the standard gap between the doses. However, our survey data indicate vaccine hesitancy among Pakistanis. For an effective outcome, awareness campaigns need to provide interventions and raise awareness regarding vaccines.

## **KEYWORDS:**

Pandemic; Vaccines; Acceptance; COVID-19; Cross-sectional study; Knowledge.

# **KNOWLEDGE, ATTITUDE, AND PRACTICE OF GENERAL PROFESSIONALS REGARDING VITAMIN D IN DISTRICT PESHAWAR**

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## **INTRODUCTION:**

Vitamin D deficiency is a global health issue. Worldwide about 2 billion people are Vitamin D deficient. It is the only vitamin that the human body synthesizes. Sunlight exposure is the major source however we can get it from dietary sources too. Vitamin D plays a central role in normal body function. Lab value for Vitamin D deficiency is when serum 25 (OH) D is lower than 25nmol/ml.

## **OBJECTIVE(S):**

1. To determine the knowledge, attitude, and practice of general professionals regarding vitamin D in District Peshawar.

## **METHODOLOGY:**

This descriptive cross-sectional study was conducted among the general professionals of district Peshawar for the duration of two months. A nonprobability convenience sampling technique was used. General professionals (educationists, engineers, lawyers, and arts & design) of age 25-45 years were included in the study while a person with any serious type of injury was excluded from the study. The sample size was calculated through an online sample size calculator and it was 400. The data was collected through a valid and reliable tool called D-KAP-38 Questionnaire. SPSS version 25 was used for data analysis.

## **RESULTS:**

Among 400 study participants, 59 % (234) were male and 41 % (166) were female with a mean age of 35years. In the section on general knowledge about Vitamin D 52 % (207) professionals had good knowledge while 48 % (193) had poor knowledge. In the section on attitude towards Vitamin D, 42 % (168) people had shown a good attitude while 58 % (232) had a poor attitude. In the case of practice, 41 % (165) had good practice while 59 % (235) had poor practice.

## **CONCLUSION:**

The general professional's knowledge about Vitamin D was good but their attitude and practice did not match the knowledge. Implementing awareness campaigns may help in building more knowledge about the importance of Vitamin D.

## **KEYWORDS:**

Vitamin D, knowledge, attitude, practice

# **ORO-FASCIAL SPACES WITH DENTAL CARIES IN A PUBLIC SECTOR TERTIARY HOSPITAL OF PESHAWAR, PAKISTAN**

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## **INTRODUCTION:**

Oro-fascial spaces are pathological latent spaces secondary to infection from the dental pulp, periodontal tissues, and bone that can progress to life-threatening situations. A host of conditions has been implicated in the creation of fascial spaces with dental caries as one of the most common causes. The other causes include the infection of the salivary glands, tonsils, adenoids, infected fractures as well as infections of other peri-oral structures. The odontogenic fascial spaces have not been well studied in this part of the world.

## **OBJECTIVES:**

1. To determine the magnitude of oro-fascial space infections, locally
2. To measure the frequency of oro-fascial spaces by carious and non-carious reasons, and
3. To determine the relative frequency of carious teeth involvement by their location.

## **METHODOLOGY:**

This ethically cleared descriptive study is based on a retrospective survey of 45 cases of oro-fascial space infections who attended the Maxillofacial Surgery Department of Khyber College of Dentistry from Jan – to March 2022.

## **RESULTS:**

Of the total 45 cases, 66% (n=30) had coexisting dental caries as its underlying cause. Among them, males' carious teeth had a distinct preponderance over the females with a 20:10 ratio. Mandibular tooth carious involvement was three times higher than the maxillary tooth with a proportion of 23:7.

## **CONCLUSION:**

Caries associated with oro-fascial space infection are alarmingly high in our setting requiring concerted efforts for the prevention, early diagnosis, and prompt treatment of dental caries.

## **KEYWORDS:**

Oro-fascial space, caries, public sector, tertiary, hospital, Peshawar, Pakistan

# SELF MEDICATION OF ANTIBIOTICS AMONG THE STUDENTS OF DISTRICT PESHAWAR

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## INTRODUCTION:

Globally self-medication of antibiotics is a public health challenge that develops antimicrobial resistance. Antibiotics are one of the most widely used drugs without a prescription in developing countries. Regarding the use of Antibiotics misinformation and misconceptions are actively circulating in our society. Although antibiotic resistance occurs naturally but due to self-medication practices it is accelerating at an alarming rate.

## OBJECTIVE(S):

1. To determine the prevalence of self-medication with antibiotics among the students of district Peshawar
2. To identify the potential factors responsible for self-medication with antibiotics among the students of district Peshawar

## METHODOLOGY:

A descriptive cross-sectional study was conducted in Peshawar for a duration of 3 months. A nonprobability purposive sampling technique was used to collect the data. Undergraduate students with age 18-25 years were included in the study while psychotic and handicapped students were excluded from the study. Data was collected through a valid and reliable self-administered questionnaire with close-ended questions categorized into demographic data and self-medication behavior. SPSS version 25 was used for analysis.

## RESULTS:

Among 380 participants 48% were male and 52% were female with a mean age of 25 years. The intake of Antibiotics in the last 3 months was about 81% (307) and the main purpose for intake was sore throat 25% (78). The most frequently used antibiotic was Amoxicillin 30 % (93). In the last 3 months, 307 participants have taken the antibiotics, among them 74% (228) have shown self-medication and the main purpose for this practice was previous experience 46% (106).

## CONCLUSION:

A high prevalence of self-medication was found among university students. The study indicated the need for enforcement of the new legislation regarding the prohibition of selling antibiotics without a prescription and awareness regarding the correct dose of antibiotics.

## KEYWORDS:

Antibiotics, self-medication, students



# **MAPPING MENSTRUAL BLOOD COLOR FOR DETERMINATION OF HEALTH STATUS AND MANAGEMENT THROUGH DIETOTHERAPY**

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## **INTRODUCTION:**

According to the World Health Organization, “health” is “a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity. When it comes to females, after puberty (age 08-14) they are said to be in a state of health when there is a normal menstrual cycle. Menstrual bleeding colors are considered relevant indicators of reproductive health, and changes in bleeding patterns may impact the quality of life of females.

## **OBJECTIVE(S):**

1. The purpose of this study is to track a female’s period, either when it starts, or when it drops.
2. To assess the mood changes, spotting between periods, and heavy and light flow.

## **METHODOLOGY:**

In this observational study, we present a menstrual blood chart and discuss what different colors of menstrual blood can mean. We also cover causative factors for color changes during the period, and symptoms underlying medical conditions.

## **RESULTS:**

With the help of the MCD Glass, it will be easy for females of every domain to detect their menstrual health by themselves. So, females need to learn what is normal for them.

## **CONCLUSION:**

In this era of knowledge and technology, females must know about their menstrual health. Here introducing MCD Glass which can detect menstrual health abnormalities.

## **KEYWORDS:**

Menstrual blood colors, Females health, MCD Glass.

# ASSESSING THE SEVERITY OF DIAPER DERMATITIS AMONG CHILDREN WEARING DISPOSABLE VS TRADITIONAL CLOTH DIAPER

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## INTRODUCTION:

Diaper dermatitis, or diaper rash, is a nonspecific term used to describe any of the various inflammatory reactions of the skin within the diaper area, including the buttocks, perianal area, genitals, inner thighs, and waistline.

## OBJECTIVE(S):

1. To measure the frequency and assessment of the severity of diaper dermatitis among children wearing disposable diapers vs. traditional cloth in children under two years of age in Pakistan.

## METHODOLOGY:

A cross-sectional study was done from January to December 2021 on children under the age of two years in Pakistan. Using a non-probability convenient sampling technique, a pre-tested and structured questionnaire was administered. The severity of diaper dermatitis was assessed. Data were analyzed by using SPSS version 24. Frequency tables were used to describe the data. P-value <0.05 was found statistically significant.

## RESULTS:

Out of a total of 520, diaper dermatitis was prevalent among (73%) of children. The majority (80%) of children are covered with a disposable diaper. The frequency of diaper dermatitis was found to be more in males (66%) in comparison with females (34%). A statistically significant ( $P < 0.05$ ) difference has been observed between the severity of diaper dermatitis and the use of disposable diapers and traditional cloth

## CONCLUSION:

This study revealed a higher prevalence of diaper dermatitis among children who are covered with a disposable diaper in comparison with a traditional cloth. The practices of parents or caregivers in maintaining proper hygiene in the diaper area, frequent changes of diapers, and the type of remedies used can be effective ways.

## KEYWORDS:

Diaper, dermatitis, children, Pakistan

# **KNOWLEDGE, ATTITUDE, AND PRACTICE REGARDING BLOOD DONATIONS AMONG PRE-CLINICAL AND CLINICAL UNDERGRADUATE MEDICAL STUDENTS**

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## **INTRODUCTION:**

The practice of blood donation has changed over the past years. The knowledge, attitude, and practice of the medical students as future doctors can be of great value if their reservations can be identified and redressed before they embark upon related health education for common people.

## **OBJECTIVE(S):**

- 1 To assess knowledge, attitude, and practices regarding voluntary blood donations among the medical students of pre-clinical and clinical years.

## **METHODOLOGY:**

This descriptive cross-sectional study was conducted at Shalamar medical and dental college over the span of 6 months. A sample size of 283 was taken using a convenient sampling technique that included students from the preclinical and clinical years. A validated questionnaire was used to collect data from the participants. Informed consent was taken from the participants and ethical approval was taken from the IRB. Data collection was done using Google forms. Frequencies and percentages were calculated and the chi-square test was applied using SPSS 21.

## **RESULTS:**

Out of a total of 283 participants, 92% of participants knew their blood groups. 34.6% had never donated blood. Among those who had voluntarily donated blood, 76.5% had done so in hospitals. 56.1% had donated blood to a friend or family member. The main reasons for not donating blood were lack of opportunity (47%) and fear of needles (27%).

## **CONCLUSION:**

Knowledge of the students in clinical years was better as compared to those of pre-clinical years whereas attitude and practices were better in students of pre-clinical years.

## **KEYWORDS:**

Blood donation, medical students, knowledge, attitude, practice.

# **DETERMINE THE DENTAL HEALTH PRACTICES & KNOWLEDGE OF MEDICAL AND DENTISTRY STUDENTS IN ABBOTTABAD - A SURVEY**

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## **INTRODUCTION:**

Oral health is one of the widely neglected fields of healthcare and its importance has often been found to be overlooked by healthcare professionals. The study aims to assess the said negligence demonstrated by future healthcare professionals who are to join different fields. An early assessment of such a fortuity would help in its early elimination and would allow oral health its due importance in the diagnosis made by healthcare professionals

## **OBJECTIVE(S):**

1. To evaluate the dental behavior of Medical & Dental Students of “Abbottabad International Medical Institute” (AIMI), Abbottabad by using “Hiroshima University- Dental Behavior Inventory” (HU-DBI)

## **METHODOLOGY:**

The sampling technique used was non-probability - convenient sampling and a questionnaire as a tool to gather data, was taken from Hiroshima University - Dental Behavioral Inventory (HU - DBI). Inform consent was taken from each participant of this study. The questionnaire consisted of 20 self-questions for agree/disagree answers. The period for gathering the statistical data was about two weeks.

## **RESULTS:**

In total of 51% BDS & 49% MBBS students with age group of 18-20yr (28.3%), 20-24yr (67.7%). in which male 43.2% & 56.8% female from all educational-levels. A total of 20 questions were asked with dichotomous responses (Agree/Disagree). Scores were observed with no significant difference between Medical-dental students; 74.3% answered they don't worry about visiting a dentist and 78% were only visiting a dentist when in pain. 49.5% were never professionally taught about brushing techniques and 64.5% believed that gum diseases cannot prevent by tooth brushing only. 47.5% use long strokes while brushing, meanwhile, 46.5% have long brushing timing.

## **CONCLUSION:**

It has been observed that adequate knowledge and behavior of oral health of both medical-dental students were moderate. Enhancement of oral health behavior in the curriculum of each year of MBBS students would however be helpful.

## **KEYWORDS:**

Dental health, medical students, dentistry students, knowledge

# RELATIONSHIP OF INDICES OF OBESITY WITH DEPRESSION, ANXIETY, AND ACADEMIC PERFORMANCE IN FEMALE MEDICAL STUDENTS

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## INTRODUCTION:

Obesity is the epidemic of the 21<sup>st</sup> Century. BMI & WHR can judge the obesity-associated risk of psycho-psychiatric, as well as endo-metabolic disorders in South Asian females. Obesity induces endo-metabolic shifts causing psycho-psychiatric disorders to develop. Enhanced adipose tissue is likely to affect an individual's mental health.

## OBJECTIVE(S):

1. This study aimed to link indices of Obesity with indices of depression and anxiety in female medical students.

## METHODOLOGY:

For this cross-sectional comparative study, 106 female medical students, selected through convenience sampling from various medical institutes of Multan for six months were equally divided into non-obese ( $BMI \leq 24.9 + WHR < 0.8$ ) and obese ( $BMI > 24.9 + WHR \geq 0.8$ ) groups. Depression and anxiety scores were calculated using Aga Khan University Anxiety Depression Scale, Beck's Depression Inventory, and Beck Anxiety Inventory while the last exam percentage was considered an indicator of academic performance. For comparative analysis, the U test was applied while to correlate quantitate variables Spearman's correlation was used

## RESULTS:

AKUADS and BDI scores of obese subjects were higher than those of non-obese subjects ( $p=0.018$  and  $p=0.030$  respectively) while the academic score of obese subjects was lesser than that of non-obese subjects ( $p < 0.0001$ ). Within non-obese and obese subjects, and within total study population too, AKUADS scores were positively correlated to BMI and WHR ( $\rho=0.39, p=0.00$ ), ( $\rho=0.38, p=0.00$ ), ( $\rho=0.36, p=0.00$ ), ( $\rho=0.38, p=0.00$ ) and ( $\rho=0.35, p=0.00$ ), ( $\rho=0.35, p=0.00$ ) respectively. BDI scores within the non-obese group, obese group, and total population were positively correlated to BMI and WHR respectively too. AKUADS and BDI scores had a negative correlation with an academic-scores in both non-obese and obese females respectively.

## CONCLUSION:

The emergence of obesity among female medical students leads to a worsening of psycho-psychiatric well-being.

## KEYWORDS:

Depression, anxiety, obesity, medical students, medical education, academic performance

# **EFFECT OF AGING AND OBESITY-RELATED TESTOSTERONE DECLINE ON SERUM ADIPONECTIN LEVELS OF HEALTHY MALES**

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## **INTRODUCTION:**

Testosterone is an obscure, yet key influencer of glucose and lipid metabolism. Testosterone levels decline with aging and obesity. Adiponectin is an endo-metabolic adipokine released by central adipose tissue. Adiponectin levels, which stay suppressed by testosterone levels, tend to rise with declining testosterone levels with aging and obesity. This creates a fertile ground for Endo-metabolic disorders.

## **OBJECTIVE(S):**

1. To estimate testosterone and adiponectin levels in men and to correlate them with their age and indices of obesity.

## **METHODOLOGY:**

This comparative – correlational study consisted of 80 males, selected within six months of approval of synopsis through convenience sampling from various tertiary care hospitals of South Punjab, equally placed into younger (20-40 years) and elder (41-60 years) categories each of which was further subdivided into nonobese and obese groups on an equal basis. Serum testosterone and adiponectin levels of subjects were estimated via ELISA. For comparative analysis, the U test was applied while to correlate quantitative variables Spearman's rho correlation was utilized.

## **RESULTS:**

Testosterone levels of younger non-obese males were significantly higher than elder non-obese males ( $p=0.00$ ) and so was true for comparison between younger and elder obese males ( $p=0.00$ ). Testosterone levels of younger nonobese males were significantly higher than their younger obese counterparts ( $p=0.003$ ) too. Adiponectin levels of younger nonobese subjects, on other hand, were not only significantly lower than their age-matched obese counterparts ( $p=0.00$ ) but were lower than their weight-matched elder counterparts too ( $p=0.00$ ). In addition, testosterone levels of the total study population showed a significant inverse correlation with waist-hip ratio ( $p=0.01$ ), waist circumference ( $p=0.00$ ), and serum adiponectin levels ( $p=0.00$ ).

## **CONCLUSION:**

Testosterone levels decline with both aging and obesity in men which leads to the concomitant rise in adiponectin levels.

## **KEYWORDS:**

Aging, Obesity, testosterone, adiponectin, Waist Hip Ratio, Waist Circumference, Body Mass Index

# COMBINED EFFECTS OF AGING AND OBESITY ON SERUM TESTOSTERONE LEVELS IN MEN OF SOUTH PUNJAB

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## INTRODUCTION:

Testosterone is an obscure, yet key influencer of glucose and lipid metabolism. Aging and Obesity are pro-inflammatory states disrupting the gonadotropic axis. Both aging and obesity, in men, lead to a decline in testosterone levels

## OBJECTIVE(S):

1. We aimed to link both age and obesity with testosterone decline in males of South Punjab.

## METHODOLOGY:

It was a cross-sectional study comprising 80 males, selected within six months of approval of synopsis through convenience sampling from various tertiary care hospitals of South Punjab, which were initially categorized into younger (20–40 years) and elder (41–60 years) groups each of which was equally divided into non-obese and obese subgroups. Serum testosterone levels of selected males were measured through ELISA. For comparative analysis, the U test was applied while to correlate quantitate variables Spearman's correlation was used.

## RESULTS:

Serum testosterone levels of younger non-obese males were significantly higher [680(575.0-778.5)] than their elder [286.0(263.5-370.00)] non-obese counterparts ( $p=0.00$ ) and so was true for comparison between younger [412.5(338.0-542.5)] obese males and their elder [258 (220.0–287.5)] obese counterparts ( $p=0.00$ ). In addition, Serum testosterone levels of younger non-obese males were higher than of younger obese males ( $p=0.00$ ) but a similar significant difference could not be derived for a comparison between elder non-obese and obese males ( $p=0.11$ ). Also, serum testosterone levels of non-obese males showed a significant negative correlation with both Waist Circumference ( $\rho=-0.37$ ,  $p=0.01$ ) and Waist Hip Ratio ( $\rho=-0.35$ ,  $p=0.02$ ) while within obese male's serum testosterone levels showed a negative correlation with waist circumference only [( $\rho=-0.64$ ,  $p=0.00$ )].

## CONCLUSION:

Circumferential obesity, if coupled with aging, leads to the steepest decline of testosterone levels in men.

## KEYWORDS:

Obesity, Testosterone, Aging, Waist-Hip Ratio, Waist Circumference, Body Mass Index

# ASSESSMENT OF TEAR FILM STABILITY TO CHLORINE WATER EXPOSURE

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## INTRODUCTION:

The tear film is a thin layer of fluid that protects the eyes from germs and bacteria by acting as a barrier. Chlorine is a renowned global disinfectant used in swimming pools. It can cause damage to the eyes by washing away the tear film on the cornea due to weak acid formation in water, leaving the eyes more vulnerable to infections like conjunctivitis, and keratitis.

## OBJECTIVE(S):

1. To evaluate the effect of chlorinated water on tear film stability in swimmers.

## METHODOLOGY:

This cross-sectional study was carried out from September 2021 to May 2022 at the Chenab club of Faisalabad. This study included 30 male subjects of age 15 to 35 years old through the purposive sampling technique. Informed consent of participants was taken before the study. Emmetropes without any type of refractive error, all ocular and systemic diseases were included. Tear film stability was assessed with tear breakup time before swimming and after swimming as well.

## RESULTS:

The results of the study showed that there were significant changes in the tear film stability ( $P=0.000$ ) after swimming in a chlorinated pool of water.

## CONCLUSION:

It was concluded that swimming in chlorinated water caused severe damage to the tear film stability as it washed away the tear film from the cornea and constant swimming in chlorinated water without safety goggles can lead to severe dry eye syndrome.

## KEYWORDS:

TBUT, Chlorine, Tear film.



# **CHALLENGES FACED BY NURSES TO PUBLISH THEIR RESEARCH IN NATIONAL AND INTERNATIONAL JOURNALS**

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## **INTRODUCTION:**

In this advanced era, nurses are still unable to publish their research work due to certain reasons such as lack of time, lack of support from the organization, irrelevant hobbies, the pressure of time, job title, lack of resources, and skills related to research write up and know about the computer. The purpose of this study was to explore the perspectives of nurses regarding challenges in publishing their research. This study may aware nurses of the challenges in publishing their research and act accordingly.

## **OBJECTIVE(S):**

1. To explore the perspectives of nurse educators regarding publishing their research in national and international journals.

## **METHODOLOGY:**

A qualitative descriptive study was carried out from November 2021 to January 2022 at three private nursing colleges in Peshawar, Pakistan; Rufaidah Nursing College, North West Institute of Health Sciences, and Rehman College of Nursing. Both genders were equally appreciated for participation. Data collection was performed through semi-structured interviews via an interview guide. Braun and Clark's (2006) 6-steps method has been used for analysis.

## **RESULTS:**

A total of 25 nurse educators, 13 males, and 12 females participated in the study. Three main themes have been developed; barriers to publication, secrets to publication, and benefits of publications. All most all of the participants expressed that publishing a research paper is an extremely difficult task with different challenges for nurses in Pakistan.

## **CONCLUSION:**

Publication of research work is extremely important for educational and career development among nurse educators. Hard work, commitment, and support from others may lead to success in publishing research papers in standard journals. Multiple individual and organizational challenges are responsible for the lack of publications in the nursing profession within Pakistan which needs to be addressed at the curriculum and policy-making level.

## **KEYWORDS:**

Research, Nurses, Perspectives, Challenges, Publication, Journals.

# SELFITIS AND ITS RELATION WITH SELF-ESTEEM AMONG THE GENERAL POPULATION

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## INTRODUCTION:

Selfies are self-portraits taken to admire the excessive pride in one's appearance. When these selfies are taken persistently in increased numbers, with futile efforts to stop taking them, it is called "Selfie addiction" or "Selfitis". Selfitis is associated with low self-esteem levels, narcissism, attention-seeking, and body dysmorphia.

## OBJECTIVE(S):

1. To estimate the burden of selfitis among the general population of Karachi, Pakistan.
2. To assess the selfitis relationship with self-esteem

## METHODOLOGY:

A cross-sectional study was conducted on the general population of Karachi, between the ages 15 and 35, from January to December 2021. Data was collected using non-probability convenience sampling, and a questionnaire that included demographic questions, the Rosenberg Self-esteem Scale, and the Selfitis Scale. Data were analyzed using SPSS 23. The Chi-square test was used for all categorical variables. All ethical considerations were taken into account.

## RESULTS:

Out of the total 461 participants, 250 (53.2%) were females and 211 (45.8%) were males. Mild selfitis behavior was reported in 49 (10.6%) individuals, 205(44.5%) had moderate selfitis and 132 (28.6%) had severe selfitis behavior. Self-esteem was low in 88 (19.1%) of the respondents, 298 (64.6%) had moderate self-esteem, whereas 75 (16.3%) individuals had high self-esteem. A strong association was found between the habit of taking selfies with sex and selfitis behavior. ( $P < 0.001$ )

## CONCLUSION:

No association between selfitis and self-esteem was found. Females are more likely to indulge in selfitis behavior than men. The younger generation (15-25 years) is most likely to have selfitis.

## KEYWORDS:

Addiction, self-esteem, narcissism, social media, behavior scale

# ASSESSMENT OF AWARENESS, PERCEPTION, AND MISCONCEPTIONS OF COVID-19 VACCINATION AMONG MUSLIM CLERICS IN KARACHI, PAKISTAN

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## INTRODUCTION:

Since December 2019, the world is facing a COVID-19 pandemic, however, vaccination against COVID-19 proved to decrease mortality globally. Pakistan's government is providing vaccines free of cost but there's still significant indecisiveness in people to get vaccinated therefore, COVID vaccine hesitancy has been a major concern.

## OBJECTIVE(S):

1. To assess the awareness and perception of COVID-19 vaccination, Misconceptions regarding COVID-19 vaccination and COVID-19 vaccination status among Muslim clerics

## METHODOLOGY:

A cross-sectional study was done in 2021 among 336 persons involved in religious services such as Pesh Imams, muftis, and muezzin. Using convenience sampling, a questionnaire was given addressing the objectives. SPSS version24 was used.

## RESULT:

The mean age of participants was  $34.1 \pm 12.9$ . Out of 336 participants, only 24% had a positive attitude towards vaccination and 25% believed vaccines aren't required after COVID-19 exposure. 12% believe chip is inserted, the vaccine causes infertility among 17%, and vaccine contains products prohibited in Islam among 14% of respondents. However, 50% of participants believed Allah will save them. 60% were unaware of the vaccination process.

## CONCLUSION:

The study reveals hesitancy for COVID-19 vaccination among Muslim scholars and clerics. There's a need to counsel this targeted group which has received insufficient attention from campaigns and health education sessions.

## KEYWORDS:

COVID-19, vaccination hesitancy, Muslim cleric, Islam

# **ASSESSMENT OF PATIENT SAFETY STANDARDS DURING COVID-19 PANDEMIC IN CLINICAL LABORATORIES OF PESHAWAR, PAKISTAN**

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## **INTRODUCTION:**

Laboratories perform an essential role in providing efficient health care. During the current covid-19 pandemic patient safety is even more crucial specifically in laboratories that are excessively visited by suspected personnel. The implementation of coronavirus protective measures in laboratories is important to curtail and control the further spread of this nosocomial infection. Health care workers come in contact with both active and asymptomatic carriers and to prevent its spread, certain guidelines specified by WHO need to be followed.

## **OBJECTIVE(S):**

1. To determine Patient safety protocol for control of corona transmission, precautions that are in practice, and assess effective communication policies in laboratories of Peshawar.

## **METHODOLOGY:**

This is a descriptive cross-sectional study that was carried out from November 2020 to March 2021 at private individual labs (not associated with hospitals) in Peshawar, Pakistan. A total of 24 labs were included in the study using convenient sampling techniques. The lab's patient safety protocols were assessed using a questionnaire formed with the help of WHO guidelines and guidelines by John Hopkin University. Data were analyzed using a Google spreadsheet.

## **RESULTS:**

According to the data collected; nine labs scored 4, 3 labs scored 5 whereas 7 and 5 labs scored 2 and 3 respectively. The highest percentage of labs (38%) scored a 4 according to the grading system. Among the three categories in which the labs were assessed, the labs performed best in category B.

## **CONCLUSION:**

The practice of patient safety procedures in laboratories of Peshawar during the current pandemic is satisfactory. Hence there is space for improvement.

## **KEYWORDS:**

Patient safety, Labs, COVID-19, Pandemic.

## REASONS FOR WHICH PHYSICIANS REFER PATIENTS TO DENTISTS

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### INTRODUCTION:

Oral health plays a significant role in overall health as they say; 'You are not healthy without good oral health' and poor lack of referral from Physicians not only effect.

### OBJECTIVE(S):

1. To find out the reasons for which Physicians do and do not refer patients to dentists.

### METHODOLOGY:

A descriptive cross-section study was carried out between March 2022 to April 2022, by the General Physicians of Peshawar. GPs were study subjects. The study tool was a questionnaire. The data were analyzed by using SPSS v.22.

### RESULTS:

Physicians who referred patients were 121 (67%), while 59 physicians (22%) did not refer patients with oral cavity diseases. The greatest number of referrals were made for dental pain (66%). Dental care for oral complications related /to diabetes or cancer was the next most frequently referred category (54%). Patients who wanted to be referred accounted for 46%. Referral for the non-odontogenic cause was 44%. 34% of referrals include dental evolution before chemotherapy and radiation.

### CONCLUSIONS:

The level of referral of a patient with oral cavity diseases from physician to dentist was moderate among the study sample. The main reason for not referring the patient was the high cost of oral health services.

### KEYWORDS:

Dental health, physicians, patients

# COMPLIANCE WITH IRON AND FOLIC ACID SUPPLEMENTS AMONG PREGNANT WOMEN OF TERTIARY CARE HOSPITALS OF DISTRICT PESHAWAR

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## INTRODUCTION:

Adequate nutrition during pregnancy is important for improving maternal and fetal health. Iron deficiency anemia during pregnancy is a public health problem across the globe that adversely affects maternal and perinatal outcomes. According to the World Health Organization anemia in pregnant women is defined as blood hemoglobin < 11 mg/dl, which is an important public health problem worldwide.

## OBJECTIVE(S):

1. To determine the level of compliance of pregnant women of district Peshawar to IFAS.
2. To determine factors influencing the compliance towards IFAS among the pregnant women of district Peshawar.

## METHODOLOGY:

This descriptive cross-sectional study was conducted among the pregnant women visiting the tertiary care hospitals of district Peshawar for antenatal checkups within the duration of two months. Non-probability purposive sampling technique was used to collect the data. The pregnant women in the 2nd and 3rd trimesters were included in the study while women in the first trimester and with other co-morbidities were excluded from the study. Data was collected through a valid and reliable questionnaire. SPSS version 25 was used for data analysis.

## RESULTS:

Among 360 study participants, the mean age was 27 years. About 24% (86) of them were living in the form of nuclear families while 76% (269) as extended. The majority of the respondents i.e., 42% (152) were illiterate. As far as compliance was concerned, 36% (124) were compliant with iron and folic acid supplements and the main reason was that the health care workers advised them to take them properly 13% (47). About 64% (167) were showing non-compliance and the major reason was that they forgot to take supplements 24% (85).

## CONCLUSION:

The level of compliance toward iron and folic acid supplement is low. Therefore, strengthening and promoting health education and awareness activities are necessary to tackle this issue.

## KEYWORDS:

Compliance, Iron, Folic Acid, IFA tablets

# PREVALENCE AND DISTRIBUTION OF MALARIA IN SUSPECTED MALARIAL POPULATION OF DISTRICT D.I. KHAN, PAKISTAN

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## INTRODUCTION:

Malaria is caused by five species from the genus plasmodium. Yearly, around 3 billion people are at risk of getting infected with half of them in 87 endemic countries. For the year 2019, globally 409,000 deaths and 229 million cases were reported.

## OBJECTIVE(S):

1. To determine the prevalence and distribution of malaria by sex, age groups, and species in the suspected malarial population of District D.I. Khan, Pakistan.

## METHODOLOGY:

This cross-sectional study was conducted in Gomal Medical College, D.I. Khan from October 1, 2020, to October 31, 2020. Data were retrieved from the office of Frontier Primary Healthcare, D.I. Khan. A sample of 108,849 was calculated from the population of 1,306,655 at risk of infection. Sex, age groups, species, and presence of malaria were the four variables addressed in the study to be described by count and percentage with 95%CI. Four hypotheses were verified by the chi-square goodness-of-fit test.

## RESULTS:

Out of 108,849 suspected cases, 9,568 (8.79%, 95%CI, 8.62-8.95%) were positive. Out of 9,568 positive cases, 5,406 (4.97%) were men & 4,162 (3.82%) women, and 1,062 (0.98%) in age group  $\leq 5$  & 8,506 (7.81%) in  $> 5$  years, and 9,121 (8.38%) were *P. vivax*, 437 (0.40%) *P. falciparum* and 10 (0.009%) mixed infections. Our prevalence of malaria was lower than expected ( $p < .00001$ ). Our distribution by sex ( $p < .00001$ ), age groups ( $p < .03231$ ) and species ( $p < .00001$ ) were not similar to expected.

## CONCLUSION:

Prevalence of malaria in the suspected malarial population of District D.I. Khan, Pakistan was 8.79%. The prevalence was lower than expected for the population. The prevalence was higher for men in the older age group infected with *P. vivax*.

## KEYWORDS:

Malaria, Plasmodium, Plasmodium vivax, Plasmodium falciparum, Prevalence, Sex, Species.

# **KNOWLEDGE, ATTITUDE, AND PRACTICE OF TRAFFIC RULES AND REGULATIONS AMONG TAXI DRIVERS OF PESHAWAR, PAKISTAN**

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## **INTRODUCTION:**

During the current time traffic injuries are among the leading causes of death and disability in many countries due to the increase in vehicular population and aggressive attitude of users. Most road accidents are resulting due to a lack of knowledge, negative attitudes, and risky practices of drivers toward traffic rules and regulations.

## **OBJECTIVE(S):**

1. To determine the knowledge, attitudes, and practice of taxi drivers towards traffic rules and regulations.
2. To determine the relationship between demographic features and knowledge, attitudes, and practice of taxi drivers towards traffic regulations.

## **METHODOLOGY:**

A descriptive cross-sectional study was conducted for approximately 6 months (2021) duration among 226 taxi drivers of Peshawar. Non-randomized convenient sampling technique was applied. Data were gathered via structured questionnaires and were analyzed through SPSS (V.26) software.

## **RESULTS:**

Among total participants, 108(47.8%) participants had excellent knowledge (Mean =6.25) about traffic rules and regulations, while 160(70.8%) had safe practices (Mean =6.95) and 115(50.9%) had a positive attitude (Mean =6.23) toward traffic rules and regulations. 73.5% of participants responded that they don't use the seat belt. The 87/174 drivers from urban residency had excellent knowledge, 94/174 had a positive attitude, and 123/174 had safe practices about traffic rules and regulations.

## **CONCLUSION:**

The majority of the taxi drivers in Peshawar had adequate knowledge, positive attitudes, and less risky practices toward traffic rules and regulations.

## **KEYWORDS:**

Knowledge, attitude, practice, traffic rules, taxi drivers



# **MEDICAL EDUCATION**



# **KNOWLEDGE AND AWARENESS OF MEDICINE DISPOSAL AMONG HEALTHCARE PROFESSIONALS**

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## **INTRODUCTION:**

Pharmaceutical active preparations are designed with specific biological and physiological properties. These formulations possess desired therapeutic action for numerous diseases and infections. But several preparations have hazardous effects on the environment. With the increased consumption of medicines, it is necessary to know about the importance of proper waste disposal.

## **OBJECTIVE(S):**

1. To know about the importance of the medical waste disposal system.
2. To know about the awareness among the health care professionals.

## **METHODOLOGY:**

The cross-sectional survey-based study was performed in Karachi. Data was collected through an online Google questionnaire form and HCWs who were directly associated with drug management were included. The results were analyzed by the SPSS software.

## **RESULTS:**

Among the 200 responders, 65% (n=132) were females and 35% (n=71) were males, 57.1% (n=116) agreed that they are aware of the hazards and disposal of medication waste and 62.4% (n=128) think that it is the responsibility of the Pakistan Pharmacy Association to make awareness of proper disposal of medicines.

## **CONCLUSION:**

Significant problems and malpractices were identified related to the drug disposal system along with inadequate awareness about its harmful effects which need to be addressed by establishing uniform guidelines for the safe disposal of medicinal waste.

## **KEYWORDS:**

Disposal, medication, awareness

# LEVEL OF AWARENESS ABOUT LIFE-SAVING MEASURES AMONG 3RD YEAR MBBS STUDENTS OF PESHAWAR MEDICAL COLLEGE

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## INTRODUCTION:

With the increase in different accidents, whether man-made or natural disasters, human lives are always under different threats. To save lives not only doctors, but undergraduate medical students should also have proper knowledge about different life-saving measures. The topic of life-saving measures is often overlooked before graduation, but its importance cannot be denied.

## OBJECTIVE(S):

1. To determine the level of knowledge of 3<sup>rd</sup>-year MBBS students about life-saving measures.

## METHODOLOGY:

The descriptive cross-sectional study was conducted among all 3<sup>rd</sup>-year MBBS students of Peshawar Medical college from 10 March to 10 April 2022. Students with any psychiatric disorder or students that were not willing to give data were excluded. Data was collected after taking verbal consent from the participants. Non-probability convenience sampling technique was used to collect data from participants. Data was collected through a structured questionnaire and permission was taken from participants through email. The data were analyzed with SPSS version 25.

## RESULTS:

The results of our study show that students having knowledge about; CPR are poor [52%], moderate [37%], good [11%]; Choking Management poor [28%], moderate [62%], good [10%]; Drowning Management poor [20%], moderate [55%], good [25%]; Snake Bite Management poor [43%], good [57%]; Myocardial Infarction poor [58%], good [42%]; Shock Management poor [18%], moderate [54%], good [28%]; Accident Management poor [40%], moderate [46%], good [14%]

## CONCLUSION:

The majority of the students had either poor or moderate knowledge about life-saving measures, hence there is a need to take measures to improve their skills.

## KEYWORDS:

Life-Saving Measures, First Aid Treatment

# CHALLENGES IN CONDUCTING QUALITATIVE RESEARCH AMONG NURSES

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## INTRODUCTION:

Research is the demand of the modern world and nurses as health care professionals can be more beneficial in this regard. Nurses are involved in caring for the patients round the clock, enabling them for understating the specific phenomena as qualitative researchers. There is a paucity of research on the topic under study with no available published study in Pakistan. This research may help the government and nursing leaders to understand issues in conducting qualitative studies among nurses as researchers and do possible interventions.

## OBJECTIVE(S):

1. To explore the perspectives of nurse educators regarding challenges in conducting qualitative research

## METHODOLOGY:

A qualitative descriptive study was carried out from August 2021 to January 2022 at three private nursing colleges in Peshawar, Pakistan; Rufaidah Nursing College, North West Institute of Health Sciences, and Rehman College of Nursing. Neither gender was equally appreciated for participation. Data collection was performed through semi-structured interviews via an interview guide. Braun and Clark (2006) 6-steps method has been used for analysis.

## RESULTS:

In a total of 26 nurse educators, 13 males and 13 females participated in the study. The data was confined to three main themes; the concept of qualitative research, challenges in qualitative research, and suggestions to promote qualitative research. Participants revealed that conducting the qualitative research is a challenging task that needs recourses and collaboration for support nurses in this regard.

## CONCLUSION:

Qualitative research is a complex process that requires commitments, support, and skills at the individual and organizational levels. The authorities need to prioritize and address these complexities by empowering nurse educators and concerned institutions in the form of recourses and research activities leading to professional grooming.

## KEYWORDS:

Research, Nurses, Perspectives, Challenges, Publication, Journals.

# PERCEPTION REGARDING USE OF FACE MASK; A COMPARATIVE STUDY BETWEEN MEDICAL AND GENERAL POPULATION

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## INTRODUCTION:

A face mask is a disposable and easy-fitting device that use to cover the nose and mouth. It provides a physical barrier against potentially infectious droplets and is a simple and low-cost non-pharmaceutical individual intervention for protecting oneself and preventing the spread of respiratory infections.

## OBJECTIVE(S):

1. To assess and compare the attitude and perception regarding the use of face masks among health care workers and the general population of Pakistan.

## METHODOLOGY:

A cross-sectional was carried out in 2021 among health care workers and the general population of Karachi. By using a nonprobability convenient sampling technique, the Face Mask Perception Scale was administered. Data were analyzed by using SPSS version 24. The frequency and percentages of related variables were determined. The Chi-square test was used to investigate the association of different dimensions of the face mask perception scale between the medical and general population. P-value < 0.05 was considered statistically significant.

## RESULTS:

Out of 600, equal participants 300 (50%) were selected from the medical and general population. Most of the participants 56.0% agreed that face mask disrupts breathing and 72.3% stated that face masks are ineffective. The majority of the participants 57.0% were stay away from people when they go out. Regarding the inconvenience, 56.8% stated that it is too much hassle to wear a face mask and 67.3% showed that it feels uneasy for another person.

## CONCLUSION:

The present study revealed adequate attitude and perception regarding the use of face masks among health care workers and the general population of Karachi. A significant association was observed between different domains of the face mask perception scale among the medical and general populations.

## KEYWORDS:

Face mask, attitude, perception, health care workers, general population.

# **DETERMINATION OF EMOTIONAL INTELLIGENCE AND ITS RELEVANCE WITH OTHER NON-COGNITIVE DOMAINS OF THE UNDERGRADUATE MEDICAL STUDENTS**

**Muhammad Omar Ahmad**, Usama Tariq

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## **INTRODUCTION:**

The importance of emotional intelligence (EI) to the success of health professionals has been increasingly acknowledged. Concurrently, medical schools have begun integrating non-cognitive measures in candidate selection processes. The question remains whether these newly added processes correctly assess EI skills.

## **OBJECTIVE(S):**

1. To measure EI levels among medical undergraduate students.
2. To find out the difference in EI among male and female students
3. To determine the correlations between participants' EI levels and their scores on the non-cognitive test Multiple mini interviews (MMI).

## **METHODOLOGY:**

This cross-sectional study was conducted on 150 first-year, Shalamar Medical, and dental college, Lahore. A convenient sampling technique was used to collect data. Emotional intelligence was assessed by a pre-validated questionnaire. Link of Google form of questionnaire was distributed by email and what's app. MMI Scores evaluation scores were obtained from the Medical education department. Emotional intelligence scores were calculated. Student t-tests and Pearson's correlation test were applied by using SPSS Version 21.

## **RESULTS:**

The mean scores after scoring were 12.5 in 70% of the participants, which indicates high emotional intelligence among medical students. There was a significant difference ( $p < 0.05$ ) in EI levels between male and female students. No significant correlations were found between MMI test scores and EI evaluation scores.

## **CONCLUSION:**

The current findings indicate high emotional intelligence among medical students. However, MMI test scores may not be predictive of medical students' EI levels.

## **KEYWORDS:**

Emotional intelligence, medical school, medical students, selection, multiple mini interviews (MMI).

# **ASSESSMENT OF DIETARY KNOWLEDGE AND ATTITUDES FOR BETTER CLINICAL PRACTICE AMONG MEDICAL STUDENTS OF A PRIVATE MEDICAL COLLEGE**

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## **INTRODUCTION:**

A healthy diet is essential for good health. Health professionals are considered role models in promoting healthy diet patterns. However, in a few studies, it was evident that most physicians have inadequate training in dietary knowledge to guide patients.

## **OBJECTIVE(S):**

- 1 To assess the dietary knowledge of final year medical students.
- 2 To assess attitudes on the importance of dietary counseling as practicing physicians in the future.

## **METHODOLOGY:**

A cross-sectional study was carried out at Shalamar medical college between August to December, after approval from SMDC-IRB. A self-administered questionnaire containing knowledge and attitude questions was distributed as a Google Doc form to final year MBBS students after their consent.

## **RESULTS:**

134 students participated in the study. Male students were found to be more overweight as compared to female students ( $p < 0.025$ ). To explore the knowledge, responses to the questions related to cardiovascular problems, diabetes, respiratory diseases, gastrointestinal diseases, and anemia were recorded. Almost three-fourths of the students were aware of major health issues. More than 90% of students considered dietary knowledge as an essential component for better clinical care of the patient.

## **CONCLUSION:**

Final year MBBS students are adequately trained in dietary knowledge concerning better dietary counseling of patients with different health conditions and they also considered having additional dietary knowledge is useful to help the patients.

## **KEYWORDS:**

Diet, Knowledge, Medical Students.



# **SURVEY OF BREAST CANCER AWARENESS AMONG MEDICAL AND NON-MEDICAL FEMALES**

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## **INTRODUCTION:**

Breast cancer is one of the major life-threatening malignancies throughout the world. Pakistan has been reported to have the highest incidence of Breast cancer in Asia. In Pakistan, 89% are diagnosed at a later stage and 59% at an advanced stage due to lack of awareness. Programs promoting awareness about breast cancer, breast self-examination (BSE), clinical breast examination (CBE), and mammography are in place but still, BSE is poorly practiced by females in Pakistan.

## **OBJECTIVE(S):**

1. To assess the behavior and practices towards breast cancer awareness among medical and non-medical females of Karachi.

## **METHODOLOGY:**

A cross-sectional study was done in 2021 on females aged 18 years or above in Karachi. Using a non-probability convenient sampling technique, a pre-tested and structured questionnaire was administered. Information was collected on socio-demographic characteristics, knowledge of breast cancer, knowledge and practice of breast self-examination, clinical breast examination, and mammography. Descriptive statistics were used to calculate the mean and standard deviation of the related variables. A Chi-square test was used to determine the association of breast cancer awareness between medical and non-medical females. P-value < 0.05 was considered statistically significant.

## **RESULTS:**

Out of a total of 611 females, (69.2%) belonged to the medical and (30.7%) were belongs to the non-medical profession. The majority (88%) were aware of breast cancer and the source of information is the media (43.7%). Females are familiar with breast self-examination (62.3%), clinical breast examination (48.9%), and mammography (64.8%). Participants knew that breast self-examination (61.4%), clinical breast examination (62.4%), and mammography (42%) are useful for early detection of breast cancer.

## **CONCLUSION:**

This study revealed that despite a positive attitude found among the population toward BSE, its knowledge and practice were inadequate. Practices of breast self-examination, clinical breast examination, and mammography still need to be promoted to improve the attitude and practice among both health care workers and the general population.

## **KEYWORDS:**

Breast cancer, awareness, practices, Karachi.

# **A DESCRIPTIVE STUDY ON AWARENESS OF TETANUS TOXOID VACCINATION AMONG UNDERGRADUATE FEMALE MEDICAL STUDENTS OF PESHAWAR MEDICAL COLLEGE**

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## **INTRODUCTION:**

Maternal and neonatal tetanus (MNT) is a public health problem that has continued to plague most countries in the developing world, despite the availability of an effective vaccine. It has a high case fatality rate.

## **OBJECTIVE(S):**

1. To determine the level of awareness and status of tetanus toxoid (TT) vaccination among female medical undergraduates of Peshawar Medical College.

## **METHODOLOGY:**

This Cross-sectional study was conducted at Peshawar Medical and Dental College for 2 months. Ethical approval for this study was taken from the UMR committee. Female MBBS students were included from 1st year to final year whereas dental females from 1st year to 4th year. These females were selected through the serial sampling technique. A validated structured questionnaire was used to collect the data with setting the criteria for adequate knowledge as corrected 8 answers from a total of 13 with 61% however, inadequate knowledge was assessed through less than 61%. The collected data will be entered into SPSS Version- 19 for computation of descriptive analysis as frequencies and percentages.

## **RESULTS:**

Among the total 346 participants, 219 (63.2%) had adequate knowledge and 127 (36.7%) with inadequate knowledge. Regarding the vaccination status of the female students, only 19 (5.49%) were fully vaccinated, 63 (18.2%) were partially vaccinated with 264 (76.3%) were unvaccinated. Out of the total females, 221 (63.8%) were willing to get their selves vaccinated whereas 125 (36.12%) were not willing at all.

## **CONCLUSION:**

Adequate knowledge regarding Tetanus Toxoid vaccination is prevalent among female medical and dental students. However, a low percentage were vaccinated.

## **KEYWORDS:**

Neonatal Tetanus, Maternal Tetanus, Tetanus Toxoid, immunization.

# EFFECTS OF EXAMINATION STRESS ON BINOCULAR VISION FUNCTIONS

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## INTRODUCTION:

The study was conducted to evaluate the effects of stress on binocular vision functions including visual acuity, contrast sensitivity, fusional vergence, accommodation, and convergence among students under examination stress.

## OBJECTIVE(S):

1. To evaluate the effects of academic stress on visual acuity, contrast sensitivity, accommodation, convergence, and fusional vergence.

## METHODOLOGY:

A Longitudinal prospective study design was carried out from Sept 2021 to May 2022 at The University of Faisalabad. A sample size of 100 students of age 18-30-year-old females were selected through purposive nonprobability convenient sampling technique. A standardized questionnaire was fulfilled by students and then stress-free students were selected. Self-made proformas were used to collect data among students. Firstly, the data was taken one week before the conduction of exams, then after the end of the examination, and the last data was taken after one week of the exams. Data analysis was done by SPSS software-20 and analyzed by using Repeated Measure ANOVA.

## RESULTS:

Results showed that mean value of convergence was  $5.92 \pm 1.76$ ,  $4.10 \pm 1.77$ ,  $7.99 \pm 2.02$ . Accommodation was  $6.6600 \pm 1.79910$ ,  $4.6800 \pm 2.4817$ ,  $7.7200 \pm 2.42912$ . Contrast was  $1.0455 \pm .12146$ ,  $1.0560 \pm .12233$ ,  $1.5300 \pm .13015$ . Visual Acuity was  $.1390 \pm .04902$ ,  $.1460 \pm .5009$ ,  $.0000 \pm .0000$ . Fusional vergence (convergence distance) was  $9.1600 \pm 1.17825$ ,  $7.3200 \pm 1.27826$ ,  $13.1800 \pm 1.33621$ . Fusional vergence (convergence near) was  $19.1400 \pm 1.53754$ ,  $17.2800 \pm 1.25594$ ,  $22.9000 \pm 1.15032$  of pre level, 1st and 2nd follow up respectively.

## CONCLUSION:

The study showed that there is an increase in the normal value of binocular vision functions due to stress which then started to normalize after one week of examination.

## KEYWORDS:

Accommodation, contrast, visual acuity, convergence.

# **MEDICAL AND DENTAL STUDENT'S PERSPECTIVES REGARDING ONLINE EDUCATION DURING COVID 19**

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## **INTRODUCTION:**

During covid-19, physical distancing measures have strongly affected academic studies, especially medical and dental studies. Physical classes were a threat due to COVID transmission, therefore, online classes were the best alternative possible throughout the medical and dental colleges of Pakistan.

## **OBJECTIVE(S):**

1. To find out the opinions of students and their perspectives regarding online education.

## **METHODOLOGY:**

This cross-sectional study was conducted on 372 students from 7 medical and dental colleges which include Peshawar Medical College, Peshawar Dental College, Khyber Medical College, Khyber Girls Medical College, Sardar Begum Dental College, Rehman Medical College, and Rehman College of Dentistry. A convenient sampling method was used and data was collected through an online questionnaire over a period of around 2 weeks.

## **RESULTS:**

A total of 106 BDS and 266 MBBS students participated of which 22% (82) were males and 78% (290) were females. Results of perspectives of online studies are given below; There was a significant difference ( $p=.005$ ) regarding perspectives between medical and dental students. There was a difference ( $p=.007$ ) but not significant among the students of different professional years regarding perspective. However, the maximum showed a positive perspective. There was no significant difference ( $p=.663$ ) among the different age groups of the participants. There was a significant difference ( $p=.000$ ) between genders regarding perspectives. The Female showed a positive perspective.

## **CONCLUSION:**

Overall students were satisfied with the online learning system during the pandemic. The majority of the students were of the view that online education was the best possible alternative during the pandemic and learned a lot because it was structured well.

## **KEYWORDS:**

Education, COVID-19, students, distance, distance education, perspective

# **EFFECTS OF SCREEN TIME AND ADAPTIVE FUNCTIONS OF MUSIC LISTENING ON ANXIETY AND DEPRESSION AMONG UNDERGRADUATE MEDICAL AND DENTAL STUDENTS OF PESHAWAR**

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## **INTRODUCTION:**

Listening to music is a common behavior engaged in by most people from childhood through to adulthood. Music listening may serve many adaptive functions for individuals across their lifespan.

## **OBJECTIVE(S):**

1. To find out the effects of screen time and adaptive functions of music listening on anxiety and depression and to correlate HADS, AFML, and their subtypes among undergraduate medical and dental students of Peshawar.

## **METHODOLOGY:**

A cross-sectional study design was conducted from March-May 2022 and included students of the Private Medical and Dental institutes of Peshawar. Participants completed the questionnaires comprising HADS, adaptive functioning of music listening, and screen time usage. The data were analyzed using SPSS v.25.

## **RESULTS:**

The mean age of the sample (n=248) was 21.67 ±1.6 years. The Cronbach alpha reliability of HADS was 0.795 and AFML was .972. More than half of the students reported better adaptive functioning of music listening (n=135, 54.4%), the majority of the students have abnormal anxiety levels (n=100, 40.3%) with only one-third of the students have depression (n=65, 26.2%) respectively. The majority of the students didn't connect to TV, other TV devices, and laptops (76.2%, 78.6%, & 57%) respectively. The Chi-square test showed a significant difference was observed between high anxiety and better adaptive functioning of music listening (p<0.05). Pearson correlation showed a significant positive correlation between HADS and its subtypes with AFML and their subtypes (p<0.05) respectively.

## **CONCLUSION:**

The Adaptive Functions of Music Listening Scale is a measure suited for outcomes-based research on music listening functions.

## **KEYWORDS:**

Adaptive functioning, anxiety, depression, music, undergraduate, medical

# **EFFECT OF SLEEP QUALITY ON MENTAL HEALTH AND ACADEMIC PERFORMANCE OF MEDICAL STUDENTS**

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## **INTRODUCTION:**

Sleep is a mystified state of human consciousness. It is a state of complex neurochemistry consisting of a delicate interplay of GABA with serotonin, norepinephrine, and acetylcholine. Sleep deprivation leads to psycho-psychiatric ailments and poor academic performance.

## **OBJECTIVE(S):**

1. To link sleep quality of first and final year medical students with their psychiatric health and academic performance.

## **METHODOLOGY:**

The sleep quality of 104 medical students, selected within six months (through convenience sampling), was estimated on Pittsburg Sleep Quality Index. Hamilton Depression Rating Scale and Hamilton Anxiety Rating Scale were used to assess the degree of depression and anxiety of the selected population, respectively while the percentage of last professional exam was taken as an indicator of academia. ANOVA with post-hoc-Tukey was used for comparative analysis while Pearson's correlation was used to correlate variables.

## **RESULTS:**

The sleep quality of final year medical students (male as well as female) was significantly lower as compared to their first-year counterparts which affected indices of their psychiatric health in such a way that final year medical students (both males and females) scored significantly higher on scales of depression and anxiety as compared to first-year medical students. Moreover, among first-year male and female as well as final year male and female medical students, sleep quality depicted a negative correlation with the degree of depression and anxiety but a positive one with their academic performance

## **CONCLUSION:**

Final year medical students have poor sleep quality, harbor higher degrees of depression and anxiety, and perform poorly on the academic front as compared to first-year medical students.

## **KEYWORDS:**

Depression, anxiety, medical students, sleep deprivation, academic performance.

# RELATIONSHIP OF SMARTPHONE ADDICTION WITH MENTAL HEALTH AND ACADEMIC PERFORMANCE OF MEDICAL STUDENTS

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## INTRODUCTION:

The modern age has introduced us to an era of smartphone dependency. Smartphone use addiction leads to psychiatric ailments. Dopamine dysregulation is a key factor leading to smartphone addiction. Smartphone addiction creates ground for neuropsychiatric disorders

## OBJECTIVE(S):

1. To associate smartphone use dependency with psycho psychiatric health and academic performance of medical students.

## METHODOLOGY:

For this cross-sectional comparative study 112 non-obese medical students, selected through convenience sampling from various medical institutes of Multan in six months, it is equally divided on basis of the Smartphone Addiction Scale (SAS-SV) into SNA (smartphone non-addict) and SA (smartphone addict) groups each of which was equally divided into male (SAS-SV $\leq$ 31 for SNAs and  $>$ 31 for SAs) and female (SAS-SV $\leq$ 33 for SNAs and  $>$ 33 for SAs) subgroups. Degree of depression, anxiety, and stress was assessed using Depression Anxiety Stress Scale (DASS-21) while the percentage of last professional academic score (AS) was considered an indicator of academic performance.

## RESULTS:

Degree of depression, anxiety, and stress among SNA (male and female) medical students was significantly lower than their SA counterparts. Moreover, the probability of smartphone addiction and anxiety among SA females was significantly higher than that of males. Smartphone addiction (both in SA males and females) had a positive correlation with depression, anxiety, and stress and a negative correlation with academic performance ( $p=0.00$ ,  $p=0.00$ ). In addition, smartphone-addicted males showed a negative correlation of smartphone-related depression, anxiety, and stress with academic performance while smartphone-addicted females showed a negative correlation between their academic performance with depression ( $p=0.00$ ) and stress ( $0.00$ ) only.

## CONCLUSION:

Smartphone addiction adversely affects the psychiatric health and academic performance of medical students.

## KEYWORDS:

Depression, Anxiety, Medical Students, Sleep Deprivation, Academic performance.

# **RISK OF DEVELOPING EATING DISORDERS IN UNDERGRADUATE MEDICAL STUDENTS OF SWAT, KHYBER PAKHTUNKHWA, PAKISTAN**

**Hamza Muhammad, Amna Tahir, Tauseef Hamid**

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## **INTRODUCTION:**

Eating Disorders (ED) are a group of complex conditions with a variety of physical and psychological symptoms, with high prevalence in adolescence. These disorders can result in grave physical and mental conditions since ED are mostly neglected and not treated on time.

## **OBJECTIVE(S):**

1. To register the incidences of high-risk students for these disorders and suggest a strategy to overcome them.

## **METHODOLOGY:**

A cross-sectional study was conducted on randomly selected 252 medical students from Saidu Medical College (SMC) (161 out of 252 students) and Swat Medical College (STMC) (91 out of 252 students), the only Medical Colleges in Swat. A total of 170 Male students participate in the study including 114 from SMC and 56 from STMC, number of female students was 82, 47 from SMC, and 35 from STMC. Data was collected from subjects through the SCOFF questionnaire, and their Body Mass Index (BMI) was calculated after measuring their height and weight with standardized tools. The data were grouped and analyzed using Microsoft Excel.

## **RESULTS:**

The results showed that 32.1% (n=81) of the population scored higher than the threshold for the SCOFF questionnaire. We found that 35 (24.8%) Basic Sciences students, with 20 (22.2%) male students and 15 (29.4%) female students, and 46 (41.4%) Clinical students including 31 (38.8%) male and 15 (48.4%) female were at high risk for these disorders. The age group 20-22 was found at higher risk of ED with an incidence of 34.3% (n=58).

## **CONCLUSION:**

A considerable number of undergraduate medical students were found to be at high risk for developing ED, the frequency was higher than in other studies done in the same age group of Pakistan. Therefore, we suggest that at the administrative level there is a need to design and implement a strategy to diagnose and overcome these disorders.

## **KEYWORDS:**

Body mass index, medical students, eating disorders



# **POLYCYSTIC OVARIAN SYNDROME – ASSESSMENT OF KNOWLEDGE AND ATTITUDE AMONG UNDERGRADUATE FEMALE HEALTHCARE STUDENTS**

**Muhammad Majid Kamran**, Wajeeha Rehman, Aqsa Shaheen, Afshan Anjum, Fatima Naeem, Urooj Siddiqui, Noor-us-Sabahad

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## **INTRODUCTION:**

Polycystic Ovarian Syndrome is an endocrinopathy that affects women throughout their reproductive age. It is characterized by ovarian dysfunction, clinical or biochemical hyperandrogenism, and polycystic ovarian morphology. It is the most prevalent endocrine cause of infertility, and it raises the risk of miscarriage, metabolic syndrome, type 2 diabetes, and various types of cancers.

## **OBJECTIVE(S):**

1. To access the knowledge and attitude among undergraduate female students of different healthcare-related professionals.

## **METHODOLOGY:**

A cross-sectional study for the assessment of knowledge and attitude regarding Polycystic ovary syndrome in undergraduate healthcare-related female students was conducted in a multidisciplinary private university in Karachi. Non-probability convenient sampling technique was used for the study. A modified pre-designed and pre-tested questionnaire was used for the assessment of knowledge and attitude of undergraduate female students of healthcare-related professions. SPSS version 22 was used for the data analysis. Descriptive statistics were calculated for relevant variables. The Chi-square test was used to observe the association between two categorical variables. The level of significance was less than 0.05.

## **RESULTS:**

The mean knowledge score of MBBS students was 10.84; DPT was 10.06; PharmD was 9.23 and for others, it was 9.27. P-value was 0.000 which is highly significant. There was no major difference in the attitude among students of different disciplines. (P-value 0.065)

## **CONCLUSION:**

The overall knowledge of students in different healthcare-related programs was not satisfactory. Measures should be taken to educate students about health-related issues having damaging physical and psychological effects.

## **KEYWORDS:**

Polycystic ovary syndrome, knowledge, attitude

# **EMOTIONAL INTELLIGENCE - ASSESSMENT AND COMPARISON OF MEDICAL STUDENTS WITH STUDENTS OF OTHER PROFESSIONAL DEGREE PROGRAMS**

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## **INTRODUCTION:**

Emotional intelligence contributes to many of the skills that helped a medical professional achieves these core competencies. Emotional Intelligence has been related to higher academic achievement and improved doctor-patient relationships. Doctors who are more aware of their patients' emotions are more successful in treating them than their less perceptive colleagues.

## **OBJECTIVE(S):**

1. To access and compare Emotional intelligence in undergraduate medical students with students of other disciplines.

## **METHODOLOGY:**

A cross-sectional study was conducted for the assessment and comparison of emotional intelligence in undergraduate medical students and other professional students in multiple private and public sector universities in Pakistan. Non-probability convenient sampling technique was used for the study. Schutte Self Report Emotional Intelligence Test was used as a standard questionnaire for the assessment of emotional intelligence. SPSS version 22 was used for the data analysis. SPSS version 22 was used for the data analysis. Descriptive statistics were calculated for relevant variables. The Chi-square test was used to observe the association between two categorical variables. The level of significance was less than 0.05.

## **RESULTS:**

There was no significant relationship between the mean emotional intelligence score and the faculty of students. However, the current residency status of students had significant results. (P-value 0.002).

## **CONCLUSION:**

High emotional intelligence benefits medical students in several ways and also helps them to establish a good doctor-patient relationship. Intervention is required to improve the emotional intelligence of students as a part of medical education.

## **KEYWORDS:**

Emotional Intelligence, Medical students, Medical education

# EVALUATION OF NEWLY INTRODUCED PRIME MODULE IN MBBS CURRICULUM IN KPK: STUDENTS' PERSPECTIVE

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## INTRODUCTION:

PRIME (Professionalism, Research, Identity formation, Management and leadership, and Ethics) is an advanced curricular theme newly introduced as an integral component of the MBBS curriculum designed by KMU to develop students' identity as medical professionals.

## OBJECTIVE(S):

1. To evaluate the effectiveness of the PRIME module on students' practical life, to comparatively report the learning objectives of PRIME as opposed to the learned attributes incorporated in students' practical life, and to assess the quality and effectiveness of the course.

## METHODOLOGY:

400 students were selected randomly from 3 public sector medical colleges. A questionnaire consisting of 33 items was made available to them through Google Forms.

## RESULTS:

Among the exposed, 58.4% of the students responded that the PRIME course improved their professional behavior. Only 25% of the respondents included that PRIME increased their interest in research while the majority were unsure. 44% of the students stated that the methods of assessment on this subject were reasonable while others stated that personality development should be examined practically which is why 40% of the students were unsatisfied with PRIME. However, 60% of the students recommend PRIME to be taught in all institutions alike, others stated it was time-consuming and an excess burden.

## CONCLUSION:

Professionalism and leadership skills were the most practically implemented module of PRIME according to the responses. The majority of the students recommend PRIME but methods of examination on this subject need to be reviewed. The result concluded should be subject to further methods of assessment. The questionnaire developed has not been tested for validity and reliability.

## KEYWORDS:

Professionalism, research, identity formation, management skills, ethics, MBBS curriculum.

# **EFFECT OF ACADEMIC STRESS, EDUCATIONAL ENVIRONMENT ON ACADEMIC PERFORMANCE & QUALITY OF LIFE OF MEDICAL & DENTAL STUDENTS; AND GAUGING THE UNDERSTANDING OF HEALTH CARE PROFESSIONALS ON FACTORS AFFECTING STRESS: A MIXED METHODS STUDY**

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## **INTRODUCTION:**

Medical education is stressful and a high level of stress may hurt the quality of life (QoL) and academic performance of the students.

## **OBJECTIVE(S):**

- 1 To correlate the effects of the educational environment, academic stress on academic performance, and quality of life of students.

## **METHODOLOGY:**

This mixed method study design was conducted in February-May 2022 and included students of the Private Medical and Dental institutes of Peshawar. Participants completed the questionnaires comprising of DREEM inventory, Academic stress scale, and WHO QoL scale. Health Care Professionals were also interviewed for their perspectives regarding students' academic stress. The quantitative data were analyzed using SPSS v.25 and the interview transcripts were analyzed by thematic analysis.

## **RESULTS:**

The mean age of the sample (n=440) was 22.24 ±1.4 years. The Cronbach alpha reliability of DREEM inventory was 0.877, Academic stress .939, and WHO QoL .895. 230 (52.3%) students reported better QoL, majority perceive educational environment positively (n=323, 73.4%) and higher academic stress (n=225, 51.1%). The Chi-square test showed males had significantly more academic stress (p<0.05), and those who perceived a positive educational environment and better QoL have better academic performance (p<0.05). Pearson correlation showed a significant correlation between academic stress, educational environment, and QoL with academic performance (p=.000). On thematic analysis, 112 codes were generated which converged into 9 categories, and finally, 5 themes emerged. 1. Challenging educational environment and system, 2. Psychological need and support, 3. Individual differences 4. Relationship/family life, 5. Adjustment issues.

## **CONCLUSION:**

A positive educational environment leads to better QoL. Students facing multi-dimensional stressors need timely psychological support.

## **KEYWORDS:**

Academic stress & performance, Quality of life, Educational Environment, Psychological support

# **FREQUENCY OF FAST FOOD CONSUMPTION AND ITS ASSOCIATION WITH OBESITY AMONG MEDICAL STUDENTS**

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## **INTRODUCTION:**

Nowadays eating and spending money on food not made at home has increased rapidly and as a result, the rate of both fast food consumption and obesity has been raised than previously. It is well known that eating food high in calories fat, sugar, carbohydrates, and salts may lead to an increase in the risk of obesity.

## **OBJECTIVE(S):**

1. To find out the frequency of fast-food consumption in 1st and 2-year students of PMC/PDC.
2. To determine the frequency of obesity in 1st and 2<sup>nd</sup>-year students of PMC/PDC.
3. To find out the awareness of students about fast food and obesity.
4. To find out the Change pattern of consuming fast food in hostilities.

## **METHODOLOGY:**

This Research was carried out from March 7, 2022, to May 2022 in Peshawar medical college and Peshawar dental college based on a cross-sectional study on students of 1st year and 2<sup>nd</sup>-year MBBS/BDS with a sample size of 182. Data was collected from the students through a questionnaire. Confidentiality of the data had been maintained. Data was entered and analyzed in IBM SPSS version 25.

## **RESULTS:**

Out of 182 students that were included in this study 59.9% of students were female while 40.1% of students were male. According to our result, 81.9% of students consumed fast food in recent weeks. Overweight and obesity based on BMI 70% of students are normal, 10% of students are overweight 2.7% are obese and 15.8% of students are underweight. 72.1% of students consume fast food in groups and 27.9% consume it alone. Most of the students (60.1%) consume fast food in the evening time. 91.2% of students are aware of fast food and obesity while 8.8% are unaware of it.

## **CONCLUSION:**

The frequency of fast food consumption is high among female students of Peshawar medical college. Most of the students of PMC/PDC are normally based on BMI Out of 182, a total of 5 are obese

## **KEYWORDS:**

Fast food, obesity, overweight.

# **TO FIND OUT LEVEL OF ACADEMIC SATISFACTION AMONG MEDICAL AND DENTAL STUDENTS OF PESHAWAR MEDICAL AND DENTAL COLLEGE DURING COVID 19 PANDEMIC**

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## **INTRODUCTION:**

The spread of COVID-19 led to the closure of educational institutions all over the world. Such closure accelerated the development of the online learning environments to avoid disruption to learning process. There is no doubt that online learning will extensively affect the clinical and academic performance of medical and dental students.

## **OBJECTIVE(S):**

1. To find out the prevalence of satisfaction from online curricular learning among the students of PMC and PDC

## **METHODOLOGY:**

A cross-sectional study with a sample size of 700 (response rate is 52%) was done, structured questionnaire was distributed. SPSS 20th version was used to analyze data by descriptive statistics and frequencies.

## **RESULTS:**

Among the respondents, 77% were from MBBS and 23% were from BDS with a mean age of 21.6%. Among the respondents 73% were unsatisfied and 23% were satisfied with online learning during a pandemic

## **CONCLUSION:**

The majority of the students were not satisfied with the present online mode of learning.

## **KEYWORDS:**

Academic Satisfaction, COVID 19, Online learning

# PREVALENCE OF INSOMNIA AMONG STUDENTS OF KHYBER GIRLS MEDICAL COLLEGE

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## INTRODUCTION:

Insomnia is a common sleep disorder in which some people have trouble falling asleep while others wake up throughout the night and these disturbances occur at least three times per week. Several studies have shown high prevalence rates of insomnia among medical students.

## OBJECTIVE(S):

To determine the prevalence of insomnia among students of KGMC, effects of insomnia on daytime function and to determine sleep latency and insomnia prevalence among day scholars and hostilities.

## METHODOLOGY:

A descriptive cross-sectional study was conducted in Khyber Girls Medical College, Peshawar on 4th year medical students of KGMC. An online questionnaire was designed using Google forms and was sent to the participants via WhatsApp to 4th year medical students. Out of which 94 responded. The data was collected in May 2021. Data analysis was done using the SPSS version 20 and MS Excel version 2010 was used to make graph and figures. Descriptive was done for categorical data and mean and +/- SD was calculated for continuous data. PSQI score was calculated as instructed in the validated PSQI scoring.

## RESULTS:

Cross sectional study was conducted in 4th year KGMC students of average age 22 years. According to PSQI scale subjective sleep quality was very good in 23.9%, fairly good in 50%, fairly bad in 7.6% students. The subjective sleep quality was bitter in hostilities as compared to day scholar students. In global PSQI score 83% of students were bad sleepers. 84% hostilities and 81% day scholars were bad sleepers.

## CONCLUSIONS:

Insomnia in 4th year students of KGMC is highly prevalent and more chronic compared to other student samples. The hostilities suffer more severely than day scholars.

## KEYWORDS:

Insomnia, Medical students and PSQI score.





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