



# Al-Shifa Annual Research Report 2018



**Al-Shifa Research Centre**

**Pakistan Institute of Ophthalmology**



**Al-Shifa Research Centre**  
**Pakistan Institute of Ophthalmology**  
**Al-Shifa Trust Eye Hospital, Rawalpindi**





***In The Name of ALLAH , The Most Beneficent,  
The Most Merciful***

# Al-Shifa Research Centre

## Vision

- To be the centre of excellence for conducting world-class and creative bio medical research activities to enhance the knowledge base and contribute towards improving the health care system and social advancement for the people of Pakistan

## Mission

- To emphasize rigorous research fundamentals while stimulating innovation and providing talented students and faculty with the high standard research facilities in the institution

## Message from the President of Al-Shifa Trust



**LT GEN(R) Hamid Javaid**

Al-Shifa Trust Eye hospital is a non political, non governmental and non profit organization dedicated towards delivery of high quality eye care services for the past 27 years. Our vision is to provide the best eye care services and improve the health of the population of Pakistan.

Pakistan Institute of Ophthalmology (PIO) is the academic wing of Al-Shifa Trust. For the past 24 years it has been providing quality graduate and post graduate medical education to the students in different fields related to Ophthalmology and also launched MSPH program keeping primary focus on contributing towards issues related to national health.

Living up to the given mandate by the trustees, Al-Shifa trust eye hospital has taken yet another important step forward by establishing Al-Shifa Research Center in September 2017.

Research is essential to guide improvements in health systems and develop new initiatives. Investment in research enhancement is therefore our effort to improve the health care systems and social advancement of the people of Pakistan.

Al-Shifa Research Center is performing all important tasks of promoting, organizing and coordinating research in health. It has been established for the promotion of research in basic and applied medical sciences

We must develop and promote a research culture and harness its benefits to create demand for research. I congratulate Al-shifa Research Center for publishing this first Annual Research Report and look forward to their valuable contributions to uplift the research standard.

I am pleased to note that a good number of research papers found their way to this Annual report based on their scientific merit. I sincerely acknowledge the contribution by all distinguished researchers and hope that their contribution to the quest for knowledge will go a long way in the service of humanity. I am sure readers will find them in quality and useful in context of health challenges in the real world.

## Message from the Dean



**Professor Dr. Wajid Ali Khan**

I feel honored to write these lines for Al-Shifa research progress report 2018. Since its inception research has remained an integral part of Al Shifa's mandate. Al-Shifa faculty has been presenting their scholarly work in national and international conferences and published in national and international journals of repute.

To give more impetus and to organize research work in a coordinated way a research centre was established at Pakistan Institute of Ophthalmology in September 2017 and it started functioning in January 2018. The aim of establishing the research centre was to have closer interaction between departments and to look for new exciting horizon for research. An institutional review board has also been established which meets once every month to evaluate and approve all research activities at Al-Shifa. It is heartening to note that last year 39 research papers have been published in national and international journals of repute. The present progress report highlights all the quality work done by Al-Shifa faculty and students.

I am sure establishing of research centre will go a long way in producing high quality research work at Al-Shifa. I take this opportunity to congratulate all the young and seasoned researchers of Al-Shifa for contributing towards Al-Shifa's research profile through their scholarly work and the management for administrative support.

# Annual Booklet 2018

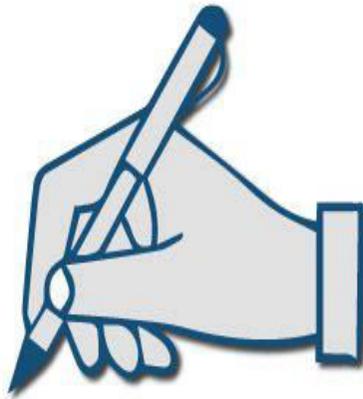
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# Abstracts



If you don't write it down, it  
didn't happen

## Vision-related quality of life in Pakistani subjects with early or moderate glaucoma

**Authors:**

Ayisha Kausar, Mahmood Ali, Haleema Masud, Farah Akhtar

**Journal:**

International Health

**Background:** The aim of this study was to report the vision-related quality of life (QoL) in Pakistani subjects with early or moderate glaucoma.

**Methods:** This case control study was conducted at Al-Shifa Trust Eye Hospital, Pakistan, from 1 January 2014 to 31 December 2015. All the patients having early or moderate glaucoma, with a disease duration of at least 6 months, and presenting during the study period, were included. Subjects in the control group were recruited from the hospital volunteer staff, spouses and friends of patients. QoL assessment was done using the NEIVFQ25 questionnaire translated into the Urdu language. A two-tailed t-test was used to test the significance of difference between the mean QoL scores and a p-value of  $\leq 0.05$  was considered significant. Multiple linear regression was carried out to assess the predictors of QoL scores.

**Results:** A total of 698 participants were enrolled, including 247 cases and 451 controls. The mean QoL score was higher in controls 81.31 (mean=81.31, SD=26.33) than in cases (mean=53.89, SD=30.32),  $p < 0.001$ . The lowest NEIVFQ-25 scores for glaucoma patients were for mental health (mean=23.88, SD=28.80) followed by general vision (mean=27.73, SD=29.74). The difference in all the mean subscale scores of two groups was statistically significant ( $p < 0.001$ ).

**Conclusion:** QoL scores are significantly reduced in Pakistani glaucoma patients with early and moderate glaucoma, with more pronounced effect on mental health and general vision.

**Key Words:** Glaucoma, quality of life, visual functions

## Initial rigid fixation techniques for Acetabular cup in cementless total hip Arthroplasty

**Authors:**

Asim Niaz Naqvi, Saman Waqar

**Journal:**

PAFMJ

**Objective:** To see the effectiveness of press fit technique to achieve initial rigid stability for Acetabular cup in cementless total hip arthroplasty (THA) done for Osteonecrosis of femoral head (ONFH) in our setting.

**Study Design:** Case series.

**Place and Duration of Study:** Study was conducted in UNIT 3 Orthopedic department, Combined Military Hospital Rawalpindi from Oct 2015 to Aug 2016.

**Patients and Methods:** All cementless total hip arthroplasty (THA) patients operated for Osteonecrosis of femoral head (ONFH) in UNIT 3 were included. Total of 12 patients were included in study with age ranging from 22 years to 47 years with mean age of 35.30 years. All patients were operated in lateral decubitus position. Confirmation of adequate fit was done by visual inspection through the hole in the acetabular cup and by rocking of the pelvis after insertion of trial cup with its attached handle. Results: Out of 12 patients, line to line technique was found to be successful in 10 (83%) patients. Two (17%) patients needed press fit technique.

**Conclusion:** Line to line technique is more successful technique for initial rigid stability in cementless total hip arthroplasty (THA) for Osteonecrosis of femoral head (ONFH) in our setting.

**Keywords:** Avascular necrosis of bone, Femur Head Necrosis, Hip Replacement Arthroplasty, Osteonecrosis

## Role of topical antibiotics in prophylaxis against Endophthalmitis following intravitreal antibiotics

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**Authors:**  
Asfandyar Asghar, Imran Ellhai,  
Naila Obaid , Ume Sughra

**Journal:**  
PJMS

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**Objective:** To compare the prophylactic use of antibiotic with placebo to prevent post intra-vitreous endophthalmitis and other complications.

**Methods:** A prospective, cohort study was conducted at Ophthalmology Department, Fauji Foundation Hospital (FFH), from June 2016 to July 2017. 1082 eyes of 673 patients were enrolled in this study. Patients were selected at non-random and divided into two groups. In Group-I, non - exposed, placebo eye drops were given after intravitreal bevacizumab injections and in Group-II, exposed, ofloxacin eye drops were given after intravitreal bevacizumab injections.

**Results:** Total 1082 eyes were given intravitreal bevacizumab injection in 673 patients. No patients in Group-I, non – exposed, receiving placebo eye drops developed post intra vitreal endophthalmitis, whereas only 01 (0.1%) patient developed post intravitreal endophthalmitis in Group-II, exposed, receiving ofloxacin eye drops. In inferential statistics the P- value was also statistically insignificant [ $\chi^2 (1, N=1082) = 0.95, P > 0.05$ ]

**Conclusion:** This study showed that topical antibiotic, as a prophylaxis after intravitreal injections has no role in the prevention of post intravitreal endophthalmitis and other complications.

**Keywords:** Intravitreal (IV), Intravitreal bevacizumab (IVB), Post intravitreal endophthalmitis (PIVE)

## Self-Awareness in Nursing : A scoping review

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**Authors:**

**Subia P.Rasheed, Ahtisham Younus  
Amara Sundus**

**Journal:**

**JCN**

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**Aims and objectives:** To outline and examine the literature about self- awareness in nursing and to identify areas for future research and practice.

**Background:** Self- awareness is important for the personal and professional development of nurses, for developing an effective nurse–patient relationship and for improving nursing abilities. Despite its importance in nursing and therapeutic nurse–patient relationship and its evolving nature, the knowledge base for self- awareness in nursing remains under- examined.

**Design:** A scoping review using PRISMA guidelines.

**Methods:** A five- step approach: (a) identification of research question; (b) identification of relevant studies using a three- step search (c) study selection; (d) data extraction and charting; (e) data collation, summarisation and reporting was used.

**Findings:** Of 1,531 identified sources, 76 full- text sources were read and 29 English language sources, published from January 1980 until January 2018, which included nurses or nursing students, were reviewed. Two themes: perspectives on self- awareness and strategies for enhancing self- awareness emerged. Under these themes, conceptualisation of self- awareness; its antecedents and value; and theory- based, educational and personal strategies for its enhancement were described. There is sufficient literature regarding self- awareness conceptualisation and theory- based strategies for its enhancement, but inconclusive evidence regarding value of self- awareness, and educational and personal strategies for its improvement.

**Conclusion:** There is limited research on self- awareness. Most of the literature comprises of theoretical discussions and opinions which adequately provide a conceptual understanding of self- awareness. However, more empirical and applied research is needed to apply the available theoretical knowledge in practice.

**Relevance to clinical practice:** This review delineated theoretical, educational and personal strategies for nurses to improve their self- awareness and indicated that engagement in self- awareness at relational and contextual levels is essential for developing nurse–patient relationship.

## Experiences of and satisfaction about care provided by male nurses: A convergent mixed-method study of patients in medical surgical units.

**Authors:**  
Ahtisham Younas, Amara Sundus

**Journal:**  
Journal of Advanced Nursing

**Aim:** To understand, comprehensively, patients' experiences of and satisfaction with care provided by male nurses in medical surgical units.

**Background:** Patients' positive experiences of and satisfaction with care are plausible indicators of nurses' caring attitude. Female nurses are considered more caring than male nurses and knowledge about patient experiences and satisfaction with care by male nurses is minimal.

**Design:** A convergent mixed methods.

**Methods:** Patients (N = 262) completed an Urdu language-translated version of the Newcastle Satisfaction with Nursing Scale and 15 participated in semi-structured interviews from August - December 2017. Descriptive statistics were used for quantitative analysis and thematic analysis for qualitative analysis. Both quantitative and qualitative data were merged and integrated for mixed-method analysis.

**Results:** High experience and moderate satisfaction scores were reported. Six themes emerged from care experiences: providing support and comfort, respecting privacy, providing information to patients and families, inability to manage workload and rushing too much, responding late and disturbing sleep. Three themes from satisfaction with nursing care: spending time with patients, capability of providing care and respecting autonomy. It was found that patients' actual experiences and satisfaction with the male nurses' care were considerably better than culturally accepted beliefs and perceptions about the role of men and women in the society.

**Conclusion:** Male nurses were caring, but patients' views of nurses' caring attitude were influenced by socio-culture perceptions of the men. Male nurses supported and comforted patients and respected their privacy but did not respond to them on time and were perceived to be authoritarian

## Bilateral orbital glial heterotopia: A rare case report

**Authors:**  
Sunday Nnamdi Okonkwo, Tayyab Afghani,  
Maheen Akbar, Amna Manzoor,  
Muhammad Asif

**Journal:**  
Oman Journal of Ophthalmology

Glial heterotopia is a rare congenital mass that often presents as a unilateral mass lesion in or around the nose. Complete surgical excision is the treatment of choice. However, before any surgical intervention for suspected glial heterotopia, distinction should be made both clinically and

radiologically from the pathologically related encephalocele to prevent the risk of cerebrospinal fluid leak and meningitis. Here, we report a rare case of bilateral orbital glial heterotopia in a 2-year-old child with review of the literature.

**Keywords:** Encephalocele, glial heterotopia, orbit

## **Patients' experiences and satisfaction about care provided by male nurses in medical surgical units in Islamabad, Pakistan: A pilot study**

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**Authors:**

**Ahtisham Younas, Amara Sundus**

**Journal:**

**Nurs Form**

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**Background:** Nursing is predominantly a female profession and caring has been considered an attribute of female nurses, which could imply a no caring image of male nurses.

**Aim:** To determine patients' experiences and satisfaction from care provided by male nurses in a private hospital in Islamabad, Pakistan.

**Methods:** This cross-sectional study included a purposive sample of 50 patients admitted to medical surgical units for at least 2 days and who had at least three professional interactions with a male nurse. The Newcastle Satisfaction with Nursing Scale was used for data collection. Descriptive statistics were used for data analysis.

**Results:** The total score for experience and satisfaction was 81 and 51, respectively. A statistically significant difference existed between experience and satisfaction scores of male and female participants, indicating that males were more pleased and satisfied with their experience of receiving care from male nurses compared to the female participants.

**Conclusion:** The male nurses were concerned for their patients, they were knowledgeable about the patients' condition and care, and provided them with clear explanations of the medical and nursing procedures. However, they seem to lack interpersonal relationship with patients and did not take initiative in understanding their patients.

## **Inequities in the lives of children**

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**Authors:**

**Saman Waqar, Asim Niaz, Saima Hamid**

**Journal:**

**PAFMJ**

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Health Equity is achieved in nations when everybody has a just and equal opportunity to reach and achieve their full health capacity and nobody fails to attain this target. Inequities, however, are those inequalities that are unjustifiable, unnecessary yet, avoidable. Adults have more control over their lives, as far as health is concerned, but children can never be held accountable for their poor health indicators, as their healthcare is directly related to the income level, health seeking behaviors, attitudes and practices of their parents. According to the Convention on children's rights report, "no

child ought to be treated wrongly based on any racial or religious differences.”A large number of children in Pakistan are not provided with even the most fundamental rights like satisfactory standards of living, health care, education, defense against violence etc. Although some health inequalities in children are biologically irreversible, health related indicators can be improved to a greater extent, if children belonging to diverse socioeconomic groups can access health services in an equitable manner. Every country should pay attention to the welfare of its children, especially those belonging to low income groups, through a vigilant national information system through an updated record. Support and guidance by the public health practitioners, physicians, and policy maker scan also play a vital role in well-being of children.

## **Knowledge , attitude and practices of patients regarding diabetes and hypertension Control**

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**Authors:**

**Qandeel Tahir, Naila Azam , Muhammad Imran, Aamira Hashmi , Amir Zeb , Aamir Furqan**

**Journal:**

**JPMI**

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**Objective:** To determine knowledge, attitudes and practices (KAP) of diabetic and hypertensive patients regarding their disease and its management and to find out the association between Knowledge, attitude and practices of patients with other independent variables.

**Methodology:** A descriptive cross sectional study was carried out in Combined Military Hospital (CMH), Rawalpindi, from September to December 2016. Data was collected from 160 diabetic and hypertensive patients who were attending medical OPD of CMH, Rawalpindi. Knowledge, attitude and practices of patients were assessed. Written Informed consent was taken from all patients and data was collected through an interview based questionnaire. Frequencies, percentages and p values were reported for the variables under study.

**Results:** Knowledge of both hypertensive and diabetic patients was good with a percentage of 71% and 59% respectively. Practice scores of both groups were low, 51% for hypertensive and 42.5% for diabetic patients. On the contrary, the attitude scores of both groups were poor having a percentage of 42% and 34% respectively. A statistically significant association was observed between educational status and knowledge of respondents.

**Conclusion:** In spite of having adequate knowledge about the disease, practices and attitude of patients towards disease management were poor.

**Keywords:** Hypertension, Diabetes, Knowledge, Attitude, Counseling

## Comparison of Changes in Central Corneal Thickness During Corneal Collagen Cross-Linking, Using Isotonic Riboflavin Solutions With and Without Dextran, in the Treatment of Progressive Keratoconus

**Authors:**

**Dr. Naima Zaheer, Dr. Wajid Ali Khan  
Dr. Shama Khan, Dr. M. Abdul Moqheet Khan**

**Journal :**

**Cornea**

**Purpose:** To compare intraoperative changes in central corneal thickness (CCT) during corneal cross-linking, using 2 different isotonic riboflavin solutions either with dextran or with hydroxy propyl methylcellulose, in the treatment of progressive keratoconus.

**Methods:** In this retrospective study, we analyzed records of corneal thickness measurements, taken during various steps of cross-linking. Cross-linking was performed using either isotonic riboflavin with dextran (group A) or isotonic riboflavin with hydroxy propyl methylcellulose (without dextran) (group B). CCT measurements were recorded before and after epithelial removal, after saturation with respective isotonic riboflavin solution, after use of hypotonic riboflavin in selected cases, and after ultraviolet A (UV-A) application. A mixed-way analysis of variance was conducted on CCT readings within each group and between both groups, and  $p < 0.05$  was considered significant.

**Results:** In group A (100 cases), after saturation with isotonic riboflavin, CCT was decreased by a mean of  $51.4 \mu\text{m}$  (12.1%). In 64%, CCT was  $<400 \mu\text{m}$  and additional hypotonic riboflavin was used. After UV-A irradiation, CCT was decreased by a mean of  $46.7 \mu\text{m}$  (11.4%). In group B (100 cases), after saturation with isotonic riboflavin, CCT was increased by a mean of  $109.4 \mu\text{m}$  (26.1%). After UV-A exposure, CCT was increased by a mean of  $59.2 \mu\text{m}$  (11.2%). There was a substantial main effect for time on CCT during corneal cross-linking (CXL),  $p < 0.001$ , within both groups. The main effect comparing CCT readings between groups A and B was also significant,  $p < 0.001$ .

**Conclusions:** During cross-linking, isotonic riboflavin with dextran causes a significant decrease in corneal thickness, whereas dextran-free isotonic riboflavin causes a significant increase in corneal thickness, thus facilitating the procedure.

**Keywords:** keratoconus, corneal cross-linking, central corneal thickness, isotonic riboflavin with dextran, isotonic riboflavin with HPMC

## Perceptions about Hepatitis C, its Myths, Misconceptions and Association with Health-Related Behaviour among People of District Layyah, Punjab, Pakistan

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**Authors:**

Muhammad Imran, Ayesha Babar Kawish,  
Aamira Hashmi, Muzammil Irshad, Naila  
Azam

**Journal:**

International Journal of Frontier Sciences

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**Background:** Hepatitis C virus is a blood-borne virus where the most common modes of its transmission are unsafe injection practices, inadequate sterilization of medical equipment, and transfusion of unscreened blood and blood products. Approximately, 130–150 million people globally are suffering from chronic hepatitis C infection. A significant number of these chronically infected will develop liver cirrhosis or liver cancer subsequently. Approximately 500,000 people die of hepatitis C related liver diseases every year. This study aimed to describe personal characteristics, knowledge of respondents and to find out association of these factors with perceptions about Hepatitis C. The study also aimed to focus on perceptions (perceived susceptibility, severity and cues to action) of general population and finding association between their perceptions and health-related behaviors.

**Methods:** A cross sectional study was conducted in Layyah city situated in Punjab province. Total of 423 male participants were selected through multistage sampling from general population of district Layyah. Structured questionnaire was used to collect data.

**Results:** Out of 423 respondents, participants with the poor level of knowledge had right perceptions about hepatitis C (16.8%). 82.7% of the respondents were aware about the availability of hepatitis C treatment. Highest perceptions were observed in age group of 21-25 years old (39.7%), unmarried (73.0%), Saraiki (58.2%) and unemployed population (45.9%). People with less myth had the right perceptions about the hepatitis C.

**Conclusion:** Increasing age, unmarried status and ethnicity were associated with right perceptions shown by respondents. Knowledge remained significant in showing association with perceptions about hepatitis C. General population perceived their susceptibility, severity of consequences and cues to actions were connecting them to show right perceptions overall. Relatives, colleagues and TV were common source of information about hepatitis C respectively.

## **Folic acid intake; Role of health care providers in counseling and perception of women about importance of folic acid intake in child bearing age**

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**Authors:**

**Aamira Hashmi , Qandeel Tahir , Muhammad Imran, Naila Azam, Rukhsana Roshan, Farman Ali**

**Journal:**

**Professional Med Journal**

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**Objectives:** Study objectives were devised to assess perceptions of women regarding importance of folic acid intake, to evaluate role of healthcare providers in counseling of women for folic acid intake, to find out association between perceptions of women with folic acid intake practices and with counseling of healthcare providers. Study Design: A cross sectional survey. Setting: Gynecology and Obstetrics Wards and OPDs of Tertiary Care and Teaching Hospitals of District Rawalpindi. Period: July-December 2016.

**Methodology:** Study participants were approached by using convenient sampling technique and sample size was of 271 women of reproductive age. Attending gynecology and obstetrics wards and OPDs of tertiary care and teaching hospitals of district Rawalpindi. After obtaining consent from institutional review board, an interview-based questionnaire was used as data collection tool. Results: Out of 271 women of childbearing age, 60% perceived the importance of folic acid intake in diet. The highest counseling contribution was from doctors (57.6%) while evaluation of role of healthcare providers was done regarding counseling. Those who had perceived importance of folic acid had a significant better intake ( $p = 0.03$ ). There was a significant association between role of healthcare providers and perceptions ( $p = 0.02$ ).

**Conclusion:** Majority of women perceived importance of folic acid intake and doctors were playing a significant role in counseling of women regarding folic acid intake during pregnancy. Folic acid intake practices were significantly influenced by women's own perceptions and role of healthcare providers was a very important factor to direct perceptions of women.

**Key words:** Folic Acid Intake, Perceptions of Women, Role of Healthcare Providers.

## **Delineation of Novel Autosomal Recessive Mutation in GJA3 and Autosomal Dominant Mutations in GJA8 in Pakistani Congenital Cataract Families**

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**Authors:**

**Shazia Micheal , Ilse Therésia Gabriëla Niewold , Sorath Noorani Siddiqui , Saemah Nuzhat Zafar , Muhammad Imran Khan, Arthur A. B**

**Journal:**

**Genes**

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Congenital cataract is a clinically and genetically heterogeneous disease. The present study was undertaken to find the genetic cause of congenital cataract families. DNA samples of a large

consanguineous Pakistani family were genotyped with a high resolution single nucleotide polymorphism Illumina microarray. Homozygosity mapping identified a homozygous region of 4.4 Mb encompassing the gene GJA3. Sanger sequence analysis of the GJA3 gene revealed a novel homozygous variant c.950dup p.(His318ProfsX8) segregating in an autosomal recessive (AR) manner. The previously known mode of inheritance for GJA3 gene mutations in cataract was autosomal dominant (AD) only. The screening of additional probands (n = 41) of cataract families revealed a previously known mutation c.56C>T p.(Thr19Met) in GJA3 gene. In addition, sequencing of the exon-intron boundaries of the GJA8 gene in 41 cataract probands revealed two additional mutations: a novel c.53C>T p.(Ser18Phe) and a known c.175C>G p.(Pro59Ala) mutation, both cosegregating with the disease phenotype in an AD manner. All these mutations are predicted to be pathogenic by in silico analysis and were absent in the control databases. In conclusion, results of the current study enhance our understanding of the genetic basis of cataract, and identified the involvement of the GJA3 in the disease etiology in both AR and AD manners.

**Keywords:** congenital cataract; homozygosity mapping; sanger sequencing; proband; GJA3 gene; GJA8; mutation; segregation

## Co-morbid depression in individuals with type 2 diabetes mellitus

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**Authors:**

Ume Sughra, Muhammad Imran

**Journal:**

JPMA

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It was a descriptive cross-sectional study conducted to determine the frequency of depression and association with factors in type 2 diabetics in diabetic clinic of Fauji Foundation Hospital Rawalpindi from 1<sup>st</sup> January - 30th June 2014. In all 110 diabetic patients were selected using convenient Sampling. Data was collected by using a pretested structured preforma. Beck's Depression Inventory (BDI) scale was used to screen depression. There were 20 males (18.2%) and 90 females (81.8%) in this study. Females had more mood disturbances and depression as compared to males, however difference was not statistically significant ( $p < 0.769$ ). 28.2% individuals had mild mood disturbances, while borderline clinical depression was present in 23.6% of study group, 20.9% were having moderate depression and 9.1% were having severe depression, rest 1.2% had extreme depression. Overall 55.5% respondents had depression in this study. Obesity was present in 60% of diabetics, 62.7% were hypertensive and 26.4% had ischemic heart disease. Depression was statistically significantly associated with hypertension ( $p < 0.002$ ).

**Keywords:** Type 2 diabetes mellitus, co-morbid depression, complications, Beck's depression inventory.

## Prevalence of Computer Vision Syndrome (CVS) Symptoms and Its Awareness Among Software Engineering Students of Twin Cities

**Authors:**  
Sultana Kausar, Ume Sughra,  
Wajid Ali Khan, Khizer Nabeel

**Journal:**  
ASJO

**Introduction:** Computer vision syndrome (CVS) is a condition in which a person experiences one or more of eye symptoms because of prolonged working on computer.

**Objectives:** To determine the prevalence of CVS symptoms, knowledge and practices of computer use in students studying in different universities of Rawalpindi, Islamabad Pakistan and to evaluate the association of various factors in computer use with the occurrence of symptoms.

**Materials and Methods:** It was a descriptive cross-sectional survey done on 350 university students of twin cities. A pre-tested structured questionnaire was used to collect data regarding demography, use of spectacles, duration of daily use of computer, symptoms of CVS and knowledge about its problem and use of preventive measures to reduce the symptoms.

**Results:** Prevalence of symptoms of CVS was found to be 87.7 %. The most disturbing symptoms was headache (57.7%) followed by eyestrain (57.10%). Students who used computer for more than 2-3 hours per day experienced significantly more symptoms of CVS ( $p=0.0001$ ). A statistically significance association was found between the posture and shoulder pain ( $p=0.03$ ). Watery eyes were also associated, and the association was found statistically significant ( $p=0.004$ ).

**Conclusion:** 87.7% of university students in Rawalpindi, Islamabad experienced symptoms related to CVS, which was seen more often in those who used computer for more than 2-3 hours continuously per day and the wrong posture.

## Frequency of Juvenile Onset Myopia in Children between 7 to 16 Years of Age

**Authors:**  
Muhammad Hanif, Syed Hassan Massana, Sana Zahra

**Journal:**  
ASJO

**Introduction:** Myopia is a type of refractive error in which eye possesses too much optical power for its axial length. Myopia with onset between 7 years to 16 years of age is called juvenile onset myopia. In the myopic eye (with accommodation relaxed) light rays from an object at infinity converge too soon and thus focus in front of retina.

**Objectives:** To determine the frequency of juvenile onset myopia in children between 7 to 16 years of age

**Study Design:** Descriptive, cross-sectional study.

**Study Duration:** 15th August 2015 to 14th February 2016.

**Materials & Methods:** A total of 300 children aged between 7 and 16 years presenting with decreased vision for at least 1 month or longer as diagnosed on logMAR chart with values greater than 0.3 which is equivalent to 6/12 on Snellen were included. Patients with disorders of the eye other than refractive errors and anisometropia were excluded. According to study objective the patient age was categorized from 07 to 16 years.

**Results:** Mean age was  $12.32 \pm 2.84$  years. Majority of the patients 167 (62.33%) were between 13 to 16 years of age. Out of the 300 patients, 193 (64.33%) were male and 107 (35.67%) were females with male to female ratio of 1.8:1. Juvenile onset myopia was found in 94 (31.33%) patients, whereas there was no Juvenile onset myopia in 206 (68.67%) patients.

**Conclusion:** This study concluded that there is high frequency of juvenile onset myopia with higher percentage between 13-16 years of age and in females.

## Association of Pterygium with Dry Eye: A Health Professional Dilemma

**Authors:**  
Sadia Arif, Ayesha Babar Kawish,  
Khizar Nabeel Ali, Abdullah Naeem Syed

**Journal:**  
ASJO

**Objective:** This study was done to assess the grade of pterygium effects on dry eye, identified by clinical tests and to find association between dry eyes and pterygium

**Study Design:** The study was cross sectional in nature and carried out in the outpatient department of Al-Shifa Trust Eye Hospital, which is a tertiary eye care hospital.

**Place & Duration:** The study was conducted from 4th June 2017 to 8th November 2017.

**Subjects and Methods:** A total of 102 eyes of 60 patients who visited OPD of Al-Shifa Trust Eye Hospital were included in this study. Each patient had a complete ophthalmological examination to rule out any other problem other than dry eye and all information was recorded in a specially designed proforma. Status of pre-corneal tear film, tear film breakup time, Schirmer test with anesthesia and Schirmer test without anesthesia were also performed.

**Results:** The study revealed that the percentage of females having pterygium was more (grade-1 65% & grade-2 53%) as compared to males (grade-1 35% & grade-2 47%). The formers (38%) who work outside in direct sun light had grade-1 pterygium with severe dry eye symptoms. There is a significant association between the grade 2 & 3 pterygium and dry eye confirmed by clinical Schirmer test with and without anesthesia and the patients with grade 2&3 pterygium facing sever dry eye. The results were also tested with the tear film breakup time test, and results were found statistically significant.

**Conclusion:** Patients with decreased tear production are more prone to the damaging effects of U-V rays in the sunlight. There is an association between dry eyes and pterygium. Patients with pterygium are having decreased tear production, decreased tear film breakup time test and decreased Schirmer test value.

## Strabismus in Patients with Low Vision visiting a Tertiary eye care setting in Rawalpindi

**Authors:**  
Saman Malik, Dr. Ume Sughra,  
Dr. Sumaira Altaf, Sultana Kausar,  
Amina Ahmad

**Journal:**  
ASJO

**Objectives:** To estimate the frequency of strabismus in patients with low vision in a tertiary eye care setting in Rawalpindi

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

**Methodology:** One hundred and seventy patients with decreased vision from the Low vision department from June 2016 to December 2016 were included through convenient sampling who fit the inclusion criteria. Patients were referred to low vision department by ophthalmologists. They were checked for their visual acuity at a distance of 4 meters using Early Treatment Diabetic Retinopathy Study (ETDRS) chart. Then cover test was performed at both short and long distance to assess strabismus. At long distance, fixation target was Snellen chart at 6 meters and fixation target was set at 33cm for the short distance.

**Results:** Out of 170 patients, strabismus was found to be in 114 patients (67%), Out of 114, 64 patients (56%) diagnosed with acquired strabismus while 50 patients (44%) had congenital strabismus. Retinitis pigmentosa was found in 34% of the patients while 12% had myopic degeneration.

**Conclusion:** This study found 67% strabismus in patients presenting in low vision department. Out of patients with strabismus, 56% had acquired deviations and 44 % had congenital strabismus.

**Key Words:** Low vision, strabismus, congenital, acquired, ETDR, cover test, Retinitis pigmentosa

## Pharmacological Aspects and Utilization of Topical Antiglaucoma Drugs

**Authors:**  
Muhammad Sadiq, Saima Jabeen, Yousaf Jamal  
Mahsood, Farah Akhtar

**Journal:**  
ASJO

**Objective:** To evaluate the utilization of topical antiglaucoma eye drops at a tertiary care teaching eye hospital.

**Subjects and Methods:** Data was obtained from computer record of the hospital and included only quantities and brand names of eye drops utilized and dispensed at main pharmacy of the hospital. The data was reorganized and rearranged by taking help from Pharma Guide Pakistan (23rd Edition, 2014-15) for active ingredients, Company name and drug group. The antiglaucoma drugs were then

segregated from the whole data and then divided into six groups. All of the groups and individual drugs were analyzed with respect to their utilization pattern during three years and their pharmacological aspects were discussed and reviewed by using Google scholars and PubMed research data base. The patients who purchased eye drops from other than hospital pharmacy were excluded from this study.

**Results:** Amongst antiglaucoma groups fixed dose combinations (including dorzolamide HCl + Timolol maleate and Latanoprost + Timolol maleate) were utilized highest in number 49082 units {1363.4 average/month (34.70 %)} during three years, followed by Beta receptors antagonists 34045 {945.7 average/month (24.07 %)}, then alpha 2 adrenergic receptors agonists 28833 units {800.9 average/month (20.39 %)}, prostaglandin analogues 22799 units {633.3 average/month (16.12 %)} and parasympathomimetics (miotics) 4630 units {128.6 average/month (3.27 %)}. Carbonic anhydrase inhibitors were the lowest utilized antiglaucoma topical drugs 2051 units {57 average/month (1.45%)} during three years (July 2012-June 2015).

**Conclusion:** It was concluded that fixed dose combinations (FDC) were the most utilized antiglaucoma eye drops and amongst single drug the timolol maleate was the highest utilized antiglaucoma drug.

## Comparison of Rise in Intraocular Pressure After a Single Intravitreal Injection of Bevacizumab and Triamcinolone Acetonide

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**Authors:**

Zulfiqar Ali Khan, Muhammad Kashif Habib,  
Nighat Jabeen

**Journal:**

ASJO

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**Background:** There are conflicting reports regarding elevation of intraocular pressure (IOP) after single intravitreal injection of bevacizumab (IVB) and triamcinolone acetonide.

**Objectives:** To compare the rise in IOP after a single intravitreal injection of bevacizumab versus triamcinolone acetonide.

**Study Design and Settings:** Randomized clinical trial conducted at Retina Clinic of Al-Shifa Trust Eye Hospital, Rawalpindi between 21st October 2014 to 21st April 2015.

**Subjects and Methods:** Sixty patients divided into two equal groups by non-probability consecutive sampling After an informed consent, Group 1 was given 1.25mg/0.05ml intravitreal bevacizumab (IVB) injection and Group 2 was given 4mg/0.1ml intravitreal triamcinolone acetonide (IVTA) injection. IOPs were recorded before injection and 30 minutes, 1 day, 1 week and 4 weeks post injection.

**Results:** Mean baseline IOP was  $14.57 \pm 1.755$  mm of Hg in IVB group and  $11.93 \pm 1.112$  mm of Hg in IVTA group. Post injection IOPs in IVB group at 30 minutes, 1 day, 1 week and 4 weeks were  $17.40 \pm 4.789$ ,  $13.20 \pm 2.441$ ,  $12.40 \pm 1.923$  and  $12.87 \pm 2.145$  mm of Hg respectively. Post injection IOPs in IVTA group at 30 minutes, 1 day, 1 week and 4 weeks were  $21.53 \pm 9.468$ ,  $16.60 \pm 4.702$ ,  $15.20 \pm 3.380$  and  $14.57 \pm 3.380$  mm of Hg respectively. The mean IOP remained significantly higher in

IVTA group as compared with IVB group at 30 minutes ( $p=0.039$ ), 1 day ( $p=0.001$ ), 1 week ( $p=0.001$ ) and 4 weeks ( $p=0.024$ ).

**Conclusion:** Single 1.25mg/0.05ml Intravitreal bevacizumab injection causes less IOP rise above the baseline as compared to 4mg/0.1ml Intravitreal Triamcinolone Acetonide.

## Pattern of Childhood Ocular Disorders in Patients Presenting at a Hospital of District Chakwal

**Authors:**

Habiba Nisar, Momina Javed , Amna Yaqub,  
Fareeha Ambreen, Sohail Ahmad

**Journal:**

ASJO

**Introduction:** Approximately 19 million children in the world are visually impaired and 1.4 million are irreversibly blind. Common ocular disorders in 5-15 years of children include refractive error, strabismus, cataract, glaucoma, etc.

**Objectives:** The objective of research was to find out the pattern of various childhood ocular disorders and frequency of refractive errors of children presenting in eye department of a secondary care hospital.

**Study Design and Settings:** A cross sectional study conducted at a secondary care hospital in district Chakwal.

**Subject and Methods:** The study included 235 patients who fulfilled the inclusion criteria. Visual acuity, presence and type of refractive error were measured. Strabismus, amblyopia was also assessed. All patients were then referred to ophthalmologist for diagnosis of ocular diseases if present and noted. In case of ocular injuries, the source of injury was documented.

**Results:** Among patients presented in hospital of district Chakwal from October 2016 to January 2017. Females were 54.5% while 45.5% were males. Refractive errors were found in 57.1%, 24.7% had conjunctivitis / vernal keratoconjunctivitis, squint was present in 7.2%, amblyopia in 5.5% of patients. About 4.7% of children presented with ocular injuries.

**Conclusion:** Refractive errors followed by conjunctivitis are the most common ocular condition diagnosed in the children of 5 to 15 years of age presenting at the secondary eye care hospital in Chakwal.

## Bilateral Optic Nerve Aplasia in a Pre-School Child

**Authors:**

Aziz Jan Bashir, Zeeshan Khan Oozeerkhan,  
Muhammad Walid Peerbux

**Journal:**

ASJO

A 4-year-old girl was presented to the Vitreoretina OPD of Al-Shifa Trust Eye Hospital with absence of vision since birth. Her pupils were mid-dilated and non-reacting to light. Ultra-sonography showed

clear vitreous with flat retina in each eye. Examination under anaesthesia revealed no anterior segment abnormalities, but the posterior segment showed absence of optic discs, retinal vasculature with prominence of choroidal vessels. Her cycloplegic refraction was +4.0 D in both eyes. Her OCT showed absence of the retinal ganglion cell layer. A neurological examination was done in a tertiary care hospital and showed normal milestones of development. After adequate consultation, an MRI was not deemed necessary for this child. Her parents were carefully counseled about the condition and she is now on regular 6 monthly follow ups in our Low Vision Clinic.

## Contrast Sensitivity Improvement with Yellow Filter in Low Vision Patients

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**Authors:**

**Amina Ahmad, Ume Sughra,  
Muhammad Kashif Habib, Muhammad Imran**

**Journal:**

**Isra Med Journal**

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**Objectives:** To measure the effects of yellow filter on contrast sensitivity in patients with low vision.

**Study Design:** A descriptive cross sectional study.

**Place and duration:** The study was carried out in the LVD of Al Shifa Trust Eye Hospital from 1st July to 31st December 2015.

**Methodology:** One hundred and ten patients from low vision department with decreased contrast were selected and Visual acuity of all the patients was measured using Early Treatment Diabetic Retinopathy Study (ETDRS) chart at a distance of 4 meters. The contrast sensitivity was measured with Pelli Robbison chart with full optical correction on place. Then, a yellow filter was applied on the existing optical correction if any, and the contrast sensitivity was again measured.

**RESULTS:** Median score for the contrast sensitivity without yellow filter (Med=7.00) was statistically lower than the median score (Med=8.00) for the contrast sensitivity with yellow filters. So the Wilcoxon Signed Rank test revealed a statistically significant improvement in contrast sensitivity with  $Z=-6.885$ ,  $p<0.001$ , with a large effect size ( $r=0.66$ ). In retinitis pigmentosa, contrast of 69% of patients was improved after measuring it with the yellow filter. All participants with pathological myopia showed significant results. There was no improvement in contrast sensitivity in participants with Albinism and Stargardt's disease. In Glaucoma, Diabetic retinopathy and in Macular scarring there was significant improvement.

**Conclusion:** A significant improvement in contrast sensitivity was seen with yellow filters in low vision patients. The contrast sensitivity of patients with Retinitis Pigmentosa, Pathological Myopia, Glaucoma, Macular Scarring and Diabetic Retinopathy was improved significantly with yellow filter.

**Key Words:** Contrast Sensitivity, Low Vision, Yellow Filter, Visual Acuity, Early Treatment, Diabetic Retinopathy, Optical Correction.

## Anisometropia and Refractive Status in Children with Bilateral Congenital Nasolacrimal Duct Obstruction

**Authors:**  
Sorath Noorani Siddiqui,  
Abdul Hannan, Hassan Mansoor,  
M. Asif, Umair Wakeel

**Journal:**  
JCPSP

**Objective:** To evaluate the state of refraction in children with bilateral congenital nasolacrimal duct obstruction (CNLDO).

**Study Design:** Descriptive study. Place and Duration of Study: Al-Shifa Trust Eye Hospital, Rawalpindi, Pakistan, from April 2014 to April 2016.

**Methodology:** Children with bilateral CNLDO were studied. Patients' refractive status was evaluated by performing cycloplegic refraction, followed by appropriate management plan. The refractive errors of both eyes were noted and compared for any significant anisometropia.

**Results:** One hundred and seventeen (n=117) children with median age (IQR) of 32 (12) months having bilateral CNLDO were enrolled. Children with bilateral CNLDO had insignificant interocular difference in terms of spherical equivalent (SE) and cylindrical refractive errors ( $p>0.05$ ). The rate of the anisometropia ( $>1$  D difference between the two eyes) was 5.98% (n=7) in children with bilateral CNLDO.

**Conclusion:** Performing cycloplegic refraction routinely in patients with bilateral CNLDO is not as urgent as compared to ones with unilateral CNLDO. Further, avoidance of early surgical intervention in children with bilateral CNLDO will spare the parents from the emotional trauma and positively influence the health economics worldwide.

**Key Words:** Anisometropia. Bilateral. Congenital. Lacrimal duct obstruction. Refractive.

## Vision Related Quality of Life Among Keratoconus Patients and Factors Affecting the Quality

**Authors:**  
Asima Rehman , Hina Sharif , Khizar Nabeel

**Journal:**  
ASJO

**Objectives:** The purpose of this study was to assess vision related quality of life among keratoconus patient and also to identify associated factors that can affect vision related quality of life among keratoconus patients.

**Subjects and Methods:** It was a cross sectional study conducted on 312 keratoconus patients, out of which 109 had undergone corneal cross linkage (CXL) surgery. Convenient nonrandomized sampling technique was used for selection of sample. Sample was selected from outpatient department of Al-Shifa Trust eye hospital Rawalpindi. Data were collected by using reliable scale of NEI VFQ-25 and

analyzed by using SPSS version 17. Chi square test of independence was used to assess any association of vision related quality of life of keratoconus patients with other variables.

**Results:** Vision related quality of life was found to be good in 51% patients while 35% respondents said that they remained worry about their eye sight most of the time. Visual acuity, education status, CXL surgery and type of CXL showed significant association with VQOL ( $p < 0.05$ ).

**Conclusion:** Keratoconus affects vision related quality of life of patients but CXL surgery and stability in visual acuity can help to improve it. Therefore, our study suggests maintaining visual acuity of keratoconus patients by timely diagnosis and CXL surgery.

## Outcomes of Combined Extraction with Intraocular Lens Implant by A Fellow During Glaucoma Fellowship

**Authors:**  
Yousaf Jamal Mahsood, Saima Farooq,  
Mahmood Ali, Farah Akhtar

**Journal:**  
ASJO

**Objectives:** To determine the outcomes of combined extraction with intraocular lens implant performed by a fellow during glaucoma fellowship. Study design: A retrospective study.

**Methods:** All the combined cataract and glaucoma surgeries performed by a glaucoma fellow during 1st November 2015 to 30th June 2016 were included in the study. All of the surgeries were performed under supervision of faculty and all intraoperative and early postoperative complications were recorded. The primary outcomes were the change in mean intraocular pressure (IOP) and best corrected visual acuity (BCVA) from the baseline. Secondary outcomes were the complications rate during surgery and in early postoperative phase.

**Results:** Total 19 eyes of 19 patients were included in the study, among which 11 (57.9%) were males and 8 (42.1%) were right eyes. Best corrected visual acuity (BCVA) improved in 17 (89.5%) eyes from the baseline while 1 eye showed no change and deterioration in 1 eye. There was improvement in IOP from baseline  $20.11 \pm 7.36$  mmHg to  $13.56 \pm 3.28$  mmHg ( $p = 0.01$ ).

**Conclusion:** Combined cataract and glaucoma surgeries performed by glaucoma fellow have good results in terms of IOP control and BCVA.

## Iridogoniodysgenesis: A Challenging Case

**Authors:**  
Afshan Ali, Mahmood Ali, Farah Akhtar

**Journal:**  
JCPSP

Iridogoniodysgenesis is a rare autosomal dominant disorder affecting anterior segment of the eye. Fifty percent cases of iridogoniodysgenesis have glaucoma, which is particularly difficult to manage. We report here a case of 40 years old man with this rare disorder, presenting to our glaucoma department. It was characterised by iris hypoplasia and juvenile glaucoma. To stop fluctuation in his

intraocular pressure (IOP) and to save his vision from glaucomatous damage, our team had to do three different surgical procedures, i.e. trabeculectomy with F5U, diode laser cycloablation and aqueous shunt procedure, over a period of 10 months. This case report discusses management of glaucoma in this particular patient and challenges faced during the treatment. Regular follow-up and timely intervention can save such patients from complete blindness. To authors' knowledge, this is the first reported case of iridogoniodysgenesis in Pakistan.

**Key Words:** Iridogoniodysgenesis, Glaucoma, Intraocular pressure.

## Exploring Astigmatism and Visual Functions in Amblyopic Children

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**Authors:**

Sana Azam, Hina Sharif, Shadab Hassan

**Journal:**

ASJO

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**Objectives:** To explore different types of astigmatism and levels of visual functions in amblyopic children. Also, to determine relationship of Astigmatism with color vision, stereoacuity and contrast.

**Subjects and Methods:** Cross-sectional study conducted at Pediatric Department of Al-Shifa Trust and Eye Hospital Rawalpindi with 150 children who were follow up cases of astigmatic amblyopia selected by convenient sampling.

**Results:** The most common type of astigmatism was Simple Myopic (33.3%) followed by Mixed Astigmatism (32.7%). Reduced stereopsis was more common in Simple Myopic astigmatism (14%) than other types of astigmatism by using TNO test for stereoacuity. About 88% of participants had stereopsis ranging from 1.80-2.25 with Pelli-Robson contrast chart. The same levels of contrast were reported in majority of Mixed Astigmatism (31%). Color vision was found normal in almost 87.3% of participants. Astigmatism showed a statistically significant relationship with amblyopia with p-value < 0.05. Stereoacuity and contrast both were found statistically related to type of astigmatism (p-value < 0.05). Colour Vision had no statistically significant relation with type of astigmatism (p-value > 0.05).

**Conclusion:** The most common types of astigmatism found in amblyopic children were Simple Myopic and Mixed Astigmatism. Visual functions were found more affected in Simple Myopic Astigmatism and least affected in Mixed Astigmatism. So there is a need for earlier and aggressive correction of astigmatism and to enhance the compliance with given treatment.

## Compliance of Spectacles Wear in School Going Children in District Rawalpindi

**Authors:**  
Ishtiaq Suleri, Saman Waqar

**Journal:**  
ASJO

**Background:** Compliance of spectacles use is associated with improvement in visual function. Objectives: To study compliance of spectacles use and determine the reasons of non-compliance among school going children in District Rawalpindi.

**Subjects and Methods:** Cross-sectional study of 441 students who had been prescribed spectacles for constant wear during school screening program done by Al-Shifa trust. After 68 months, a follow up visit was conducted for assessing the compliance of spectacles. Information on age, gender, school system, type of refractive error etc. was collected and analyzed to find the association of different factors with compliance of the respondents.

**Results:** The non-compliance rate in school going children of Rawalpindi district was 59%. A comparatively higher proportion of boys (20.7%) were wearing spectacles than girls (20.5%) ( $P < 0.05$ ). Compliance of spectacles was positively associated with age ( $P=0.001$ ), type of refractive error ( $P=0.008$ ), father's education ( $P=0.001$ ), mother's occupation ( $P=0.001$ ) and father's occupation ( $P=0.001$ ) (C.I=95%). The reasons of non-compliance included broken glasses (16%), forgetting at home (13%), lost glasses (9%), peer pressure (19%), do not like spectacles (28%) and poor financial conditions (15%).

**Conclusion:** The compliance rate was found to be 41%. The school screening services should include follow up visits to ensure compliance of spectacles. Counseling of parents, teachers, students and providing spectacles free of cost will be an effective initiative towards improvement of compliance these children.

## Barriers for spectacle users in choosing contact lens as an alternative vision correction method

**Authors:**  
Shamsa Sarwar, Tayyab Afghani, Saman Waqar

**Journal:**  
ASJO

**Aims:** To find out the barriers for spectacle users in using contact lenses as an alternative vision correction method and to analyze their preferences regarding known vision correction tools.

**Study Design and methodology:** This was a cross-sectional study. To achieve the objectives of the study, a questionnaire regarding the issue was presented to the participants after taking verbal informed consent. The study population included students of Rawalpindi and Islamabad.

**Results:** The study included 350 spectacle wearers; out of which 238 were females and 112 were males with mean age of  $21.15 \pm 3.57$ . Out of the total participants 73.7% wore glasses regularly. 66.85% participants were hesitant towards spectacle use, majority of them were females. Among

correction options all participants knew about glasses followed by contact lenses while comparatively less people knew about refractive surgery. Glasses were the most preferred choice among the correction options available followed by refractive surgery (21.4%) while only 16.9% preferred contact lenses as a vision correction tool. Among the studied subjects only 23% used contact lenses simultaneously with glasses and 74.7% were satisfied with its use. The major barrier found towards contact lens use among spectacle users was fear of side effects (65.3%) and inconvenience of its use (54.6%), followed by care and maintenance (52.4%).

**Conclusions:** In spite of having the knowledge of contact lenses a very few people preferred contact lenses as a tool for vision correction. And the main barriers found were fear of side effects (eye infections) and difficult procedure of use and care, while cost was found as the weakest barrier.

## Role of B-Scan in Evaluating Posterior Segment Pathologies in Opaque Ocular Media

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**Authors:**

Fariha Taimur, Tehmina Nazir, Badruddin  
Athar Naeem

**Journal:**

ASJO

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**Objective:** To determine the diagnostic accuracy of B scan ultrasonography in detecting posterior segment pathologies in patients of dense cataract, keeping postoperative funduscopy findings as a gold standard.

**Subjects and Methods:** This study was conducted at the Ophthalmology department, Fauji Foundation Hospital; Rawalpindi over a period of one year. 333 patients from ophthalmology outpatient department (OPD) at FFH Rawalpindi fulfilling the inclusion criteria was selected after permission from concerned authorities. All confounding variables were excluded. Informed written consent was taken. Complete Basic ophthalmological examination including; vision, IOP and slit lamp examination (anterior and posterior segment) was performed. Posterior segment in B-scan image was studied to find hidden pathologies.

**Results:** Total 333 patients were included in the study according to the inclusion criteria of the study. Mean age (years) in the study was 62.26±10.69 with 14 (4.2) male and 319 (95.0) female patients. There were 11 (3.3) patients who had positive B-scan in detection of posterior pathologies of dense cataract patients. The sensitivity and specificity of B-scan ultrasonography in detecting posterior segment pathologies in patients of dense cataract keeping post-operative funduscopy findings as a gold standard was 91.67% and 100% respectively.

**Conclusion:** The study concludes that the sensitivity and specificity of B-scan ultrasonography in detecting posterior segment pathologies in patients of dense cataract keeping post-operative funduscopy findings as a gold standard was high in our population.

## Post-operative Complications after Reconstruction of Contracted Socket Using Amniotic Membrane

**Authors:**  
Tehmina Nazir, Fariha Taimur

**Journal:**  
ASJO

**Introduction:** This study aimed to report the rate of post-operative complications after reconstruction of contracted socket using amniotic membrane.

**Objective:** To see the rate of post-operative complications after reconstruction of contracted socket using amniotic membrane.

**Study Design:** Quasi-experimental

**Setting:** The study was conducted at Al-Shifa trust Eye Hospital Rawalpindi.

**Subjects and Methods:** Patients presenting to the clinic with acquired contracted sockets were included in this study. Amniotic membrane used in study was prepared at Al-Shifa Trust Eye Hospital from placentas. Reconstructive surgery and amniotic membrane transplantation was performed by same surgeon under GA. Patient was followed up in outpatient department for 3 months to observe the post-operative complications.

**Conclusion:** Amniotic membrane grafting is a simple and straight forward surgical technique for the treatment of contracted socket and it gives cosmetically and functionally acceptable results with minimal post-operative complications in reconstruction of anophthalmic contracted socket.

## Congenital cystic eye ball with an intracranial anomaly: A Case Report

**Authors:**  
Maheen Akbar, Amna Manzoor,  
Sunday Okonkwo

**Journal:**  
ASJO

A three months old female child presented to Al-Shifa Trust Eye Hospital, Rawalpindi, with abnormal protrusion from the left orbit since birth which increased gradually in size. The mass was cystic in consistency, non-tender, non-pulsatile and trans illuminated light. No eyeball could be identified. MRI brain and orbit revealed a cystic orbital mass with complete agenesis of corpus callosum, with no other associated brain anomaly. Her systemic evaluation was unremarkable at three months. No positive family history was found. Routine hematological and biochemical tests were normal. Cystic eye ball is a very rare entity and its association with complete agenesis of corpus callosum even rarer. It brings home a very important message of grave systemic associations of a cystic eye ball making MRI brain and orbit mandatory in all cases with this congenital condition. This can easily be overlooked by an ophthalmologist and systemic review missed. Another important consideration is a regular follow up in such cases with a pediatric neurologist keeping in view the agenesis of corpus callosum and the evolution of its symptoms.

## Huge Gastric and Ileal Trichobezoars Causing Small Bowel Obstruction

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**Authors:**

Muhammad Imran, Ume Sughra, Aurangzeb Khan

**Journal:**

JCPSP

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The bezoar is the accumulation of undigestible food or fibre in the digestive tract, most commonly in stomach and proximal small bowel. Trichobezoar is an accumulation of hair. They may present as an independent mass in small bowel or with or without an extension into the small bowel. The trichobezoars are well described, in terms of surgical, diagnostic, and therapeutic procedures. However, there are very few reports on psychiatric literature and a dual presentation of gastric and ileal trichobezoars. The authors present a case report of a gastric with an ileal trichobezoar that is rarely reported in literature. A young girl with a history of trichophagia presented with features of small bowel obstruction. On physical examination, there was abdominal distension with a huge mobile mass on left side of umbilicus extending up to the epigastrium. There were dilated small bowel loops on abdominal radiograph. Ultrasound-abdomen also showed fluid-filled dilated small bowel loops. She was further investigated with CT scan abdomen, which showed a large mass occupying whole of the stomach and another mass in distal ileum causing small bowel obstruction, suggestive of trichobezoar. Through anterior wall gastrotomy, huge trichobezoar was removed from stomach; and through distal ileal enterotomy, ileal trichobezoar was removed.

**Key Words:** Trichobezoars. Stomach. Obstruction. Small bowel obstruction. Trichotillomania

## Clinical Audit of Patients Presenting at Department of Glaucoma as Part of Glaucoma Fellowship Program

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**Authors:**

Yousaf Jamal Mahsood, Muhammad Naeem, Hussain Ahmad, Irfan Ullah, Saima Farooq, Farah Akhtar

**Journal:**

ASJO

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**Aims:** To determine the different types and outcome of glaucoma presented during one-year glaucoma fellowship. Study Design: Observational cross-sectional study. Subjects and

**Methods:** This study represents the clinical experience of a fellow during one year glaucoma fellowship at Glaucoma clinic of Al-Shifa Trust Eye Hospital, Rawalpindi. The duration of this study was one year i.e. from 1st July 2015 to 30th June 2016 and 2728 eyes of 1440 patients were included. Type of glaucoma, intraocular pressure (IOP), ocular or systemic associations was recorded and management plan was devised under the close supervision of glaucoma faculty.

**Results:** Of total 1440 patients examined, 966 (67.09%) were males and 474 (32.91%) were females. New patients examined by the fellow were 255 (17.7%) and 1185 (82.3%) were on their follow-up schedule. Primary open angle glaucoma was the most common type and was diagnosed in 868 (31.61%) eyes followed by pseudo exfoliation glaucoma in 408 (14.95%) and glaucoma suspects in 306 (11.21%) eyes. On presentation to OPD, 2304 (84.45%) eyes had controlled IOP either with medicines or surgery and 424 (15.54%) were uncontrolled. Medical treatment was the most common mode of treatment given to 1740(63.78%) eyes followed by observation in 636 (23.3%) and trabeculectomy in 161 (5.9%) eyes.

**Conclusion:** Primary Open angle glaucoma was the most common type of glaucoma presented at glaucoma clinic however pseudoexfoliation syndrome is also a common type of glaucoma in this region.

## Pediatric Orbital Primitive Neuroectodermal Tumors

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### Authors

Tayyab Afghani, Hassan Mansoor,  
Raza Hamdani SN

### Journal

J Pediatric Ophthalmol Strabismus

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**Purpose:** To present the clinical, radiological, histopathological, immunohistochemical features and the follow-up of orbital primitive neuroectodermal tumors (PNETs) in pediatric patients along with a review of the literature.

**Methods:** A retrospective analysis of all diagnosed cases of orbital PNET was done. Patients' ophthalmic findings, imaging, immunohistochemistry, metastatic work-up, treatment, globe salvation, and survival were documented and a mini literature review of orbital PNET was performed.

**Results:** Four diagnosed cases of orbital PNET presented with proptosis and visual impairment were treated during the study period. The radiological imaging showed primary orbital involvement. There were three males and one female with a mean age of 63.75 months (range: 3 to 244 months). Histopathology of all studied patients showed round malignant cells with hyperchromatic nuclei, increased nuclear cytoplasmic ratio, and positive test results for CD99 and FLI-1. The studied patients underwent orbital surgery for excision of tumors followed by chemotherapy. One of the patients also had external radiation in addition to chemotherapy after a second recurrence. The follow-up period of these patients varied from 1 to 5 years. Only one child who had recurrence twice was followed up to 5 years, but was lost to follow-up after that.

**Conclusions:** The authors believe that most orbital peripheral PNET tumors present as well-defined masses on both imaging and perioperatively and are easily removed surgically. The apparently disguised "benign profile" of orbital PNET may prove deceptive and the shorter duration of symptoms remains a strong reminder of the malignant nature of the lesion.

## Types of Orbital Osteoma - A descriptive analysis

**Authors:**  
Tayyab Afghani, Hassan Mansoor

**Journal:**  
Orbit

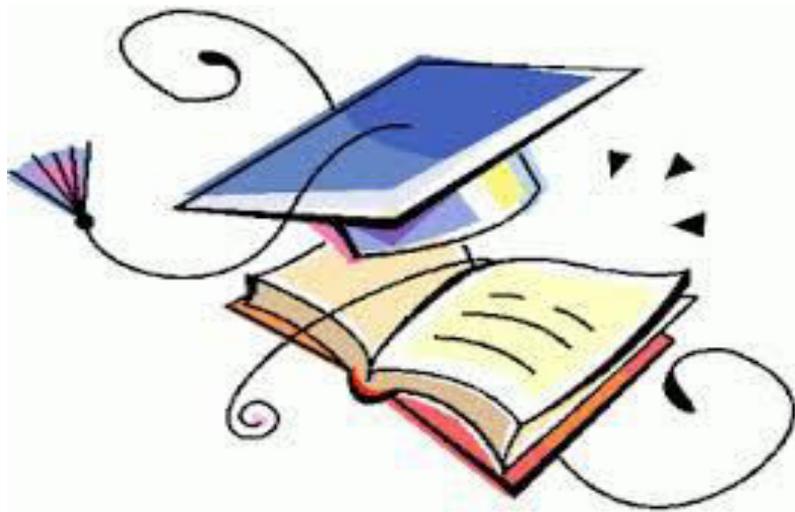
**Aims:** This study describes different types of orbital osteoma based on clinical per-operative morphology and radiological findings to facilitate communication between ophthalmologists and surgical management for a better patient outcome.

**Materials and Methods:** The study was conducted in the Orbit and Oculoplastics Department of Al-Shifa Trust Eye Hospital, Rawalpindi, Pakistan, from July 1, 2001 to June 30, 2014. A retrospective analysis of 520 diagnosed orbital tumours who presented to us was carried out and the prevalence of orbital osteoma was determined. The sampling technique was non-randomized sampling. Based on the clinical morphology observed during surgical intervention as well as the radiological findings of the orbital osteoma, a simple yet useful description of orbital osteoma was introduced.

**Results:** The retrospective analysis of 520 diagnosed orbital tumours revealed a prevalence of 2.3% (n = 12) of orbital osteoma. Based on our observation of the 12 (n = 12) cases of orbital osteoma, we have classified orbital osteoma into a combination of seven types: "sessile" or broad-based osteoma; "pedunculated" or mushroom osteoma with a thin cylindrical stalk of origin; "dumb-bell"-shaped osteoma with the simultaneous presence in orbital and adjoining sinus/nasal cavity; "wrapped" osteoma, covered by a thin cartilaginous layer; "naked" osteoma, without any such covering; "homogenous" or uniformly dense osteoma; and "heterogeneous", soft-dense osteoma with varying areas of density.

**Conclusion:** This study attempts to introduce a simple description of different types of orbital osteoma based on clinical per-operative morphology and radiological findings for the first time to facilitate the surgical removal of orbital osteoma.

# Dissertations



‘It always seems impossible until it is done’

Nelson Mandela

## Dissertations:

Twenty Six dissertations have been submitted to Al-Shifa research Centre in 2018:

| Sr. No | Resident/Student Name   | Supervisors              | Title  |
|--------|-------------------------|--------------------------|--|
| 1      | Dr. Khyal Muhammad Khan | Prof. Dr. Wajid Ali Khan | Comparison of the mean endothelial cell loss between phacoemulsification and extra capsular cataract extraction  |
| 2      | Dr. Taiba Baig          | Prof. Dr. Wajid Ali Khan | Role of corneal collagen cross linking in halting the progression of keratoconus : A contralateral eye study     |
| 3      | Ayesha Abbas            | Dr. Shama                | Assessment of quality of life among keratoconus patients with spectacles versus rigid gas permeable contact lens |
| 4      | Momnah Naseer           | Dr. Tayyab Afghani       | Comparative study of amplitude of accommodation using different methods  |
| 5      | Hafiza Mussafa Khalid   | Dr. Abdullah             | Assessment of the association of IOP and corneal thickness with smoking  |
| 6      | Ansa Amjad              | Dr. Tayyab Afghani       | Prevalence of color vision deficiencies in Low vision patients   |
| 7      | Simab Kishwar           | Dr. Farah Akhter         | Comparison of binocular visual functions in primary open angle glaucoma with normal subjects A case study        |
| 8      | Sidra Shaheen           | Dr. Tayyab Afghani       | Comparison of IOP measured with Goldman applanation tonometer and non-contact air puff tonometer                 |
| 9      | Fatima Yousaf           | Dr. Maheen Akbar         | Frequency of asthenopia and its association with refractive errors in university students                        |
| 10     | Farrukh Mehmood         | Dr. Mahmood Ali          | Assessment of rule similarity and symmetry pattern of axis in bilateral astigmatism                              |
| 11     | Momna Tahir Kiyani      | Dr. Tayyab Afghani       | Factors effecting the choice of spectacles by a user   |
| 12     | Aamna Ahmed             | Dr. Khizer Nabeel        | Knowledge & Practices regarding antenatal care among male partners   |
| 13     | Ahtesham Ellahi         | Ms. Hina Sharif          | Assesment of critical thinking and its association with curriculum among high school students of Rawalpindi      |
| 14     | Amnah Amjad             | Dr. Ayesha Babar Kawish  | Predictors of emotional eating among medical students in District Rawalpindi. A                                  |

|    |                 |                                 |  |
|----|-----------------|---------------------------------|--|
|    |                 |                                 | comparative study  |
| 15 | Asima Shahzad   | Dr. Ayesha Babar Kawish         | To access knowledge and practice of nursing staff regarding Kangaroo Mother Care in Tertiary Care Hospitals of Islamabad         |
| 16 | Fariha Munir    | Dr. Saman Waqar                 | Heavy school bags and its association with musculoskeletal problems among early adolescents of Rawalpindi                        |
| 17 | Fazal Noor      | Dr. Saman Waqar                 | Prevalence of depression among adult population due to war on terror in south Waziristan Agency, Wanaa, Pakistan                 |
| 18 | Fizza Munir     | Dr. Ume Sughra                  | Assesment of multiple health behaviours among early adolescents of Rawalpindi cantt Pak  |
| 19 | Hasan Raza      | Dr. Ume Sughra/ Dr. Khizer      | Compliance with point of sale regulations for Tobacco Product in Islamabad, Pakistan   |
| 20 | Ifthikhar Ahmad | Dr. Saman Waqar                 | Assesment of knowledge and practices of healthcare physicians regarding child malnutrition in tertiary care hospitals Rawalpindi |
| 21 | Khalid Mahmood  | Dr. Ume Sughra                  | Barriers towards obtaining driving license and their association with road traffic accidents                                     |
| 22 | Mobeen Kausar   | Dr. Saman Waqar                 | Stress and coping strategies of parents of Deaf & Mute Children  |
| 23 | Nawal Daud      | Ms. Hina Shareef/Dr. Ume Sughra | Assessment of perceived stress & Job demand in General surgeons of Rawalpindi  |
| 24 | Sabahat Shaheen | Dr. Ume Sughra                  | Mapping the knowledge & practices regarding Menstrual hygiene of Middle Adolescents Girls in Rawalpindi                          |
| 25 | Syeda Mehak     | Dr. Ume Sughra                  | Assesing knowledge of health care professionals regarding hidden hunger  |
| 26 | Umer Farooq     | Dr. Ayesha Babar Kawish         | MDR-TB among children under 15 years of age in KPK & FATA Pakistan   |

# Presentations



“If you can’t explain it simply, you don’t understand it well enough.”

**Albert Einstein**

## Papers Presentations:

Fifty-One research papers have been presented in national and international conferences:

| Sr. No | Speaker            | Authors  | Title   |
|--------|--------------------|--|---|
| 1      | Dr. Wajid Ali Khan | Dr. Naima Zaheer,<br>Dr. Wajid Ali Khan<br>Dr. Shama Khan,<br>Dr. Abdul Moqet Khan | Comparison of Changes in Central Corneal Thickness During Corneal Collagen Cross-Linking, Using Isotonic Riboflavin Solutions With and Without Dextran, in the Treatment of Progressive Keratoconus |
| 2      | Dr. Wajid Ali Khan | Dr. Wajid Ali Khan   | Overview of keratoplasty with special emphasis on confocal microscopy   |
| 3      | Dr Abdul Moqet     | Dr. Abdul Moqet  | Total corneal melting   |
| 4      | Dr. Sorath Noorani | Dr. Sorath Noorani   | Globe removal How relevant in Today's practice indication and method of globe removal   |
| 5      | Dr. Sorath Noorani | Dr. Sorath Noorani   | Pediatric cataract surgery  |
| 6      | Dr. Wajid Ali Khan | Dr. Wajid Ali Khan   | Bacterial Keratitis overview  |
| 7      | Dr. Wajid Ali Khan | Dr. Wajid Ali Khan   | Corneal biopsy for corneal ulcers   |
| 8      | Dr. Tayyab Afghani | Dr. Tayyab Afghani   | Orbit   |
| 9      | Dr. Tayyab Afghani | Dr. Tayyab Afghani   | Management of Lymphangioma and varicose of Orbit  |
| 10     | Dr. Tayyab Afghani | Dr. Tayyab Afghani   | Tumors of the Extraocular muscles a large case series   |
| 11     | Dr. Tayyab Afghani | Dr. Tayyab Afghani   | Results of WHO TADDS survey in Pakistan   |
| 12     | Dr. Tayyab Afghani | Dr. Tayyab Afghani   | Barriers to update of Low vision services and challenges faced by providers   |
| 13     | Dr. Tayyab Afghani | Dr. Tayyab Afghani   | Pediatric orbital space occupying liens   |
| 14     | Dr. Sorath Noorani | Dr. Sorath Noorani   | Screening guidelines  |
| 15     | Dr. Sorath Noorani | Dr. Sorath Noorani   | Retinoblastoma  |
| 16     | Dr. Sorath Noorani | Dr. Sorath Noorani   | Retinopathy of prematurity  |
| 17     | Dr. Sorath Noorani | Dr. Sorath Noorani   | Peadriatic cataract surgery   |
| 18     | Dr. Sorath Noorani | Dr. Sorath Noorani   | Goniotomy   |
| 19     | Dr. Sorath Noorani | Dr. Sorath Noorani   | Enucleation in retinoblastoma   |
| 20     | Dr. Sorath Noorani | Dr. Sorath Noorani   | Retinopathy of Prematurity  |
| 21     | Dr. Sorath Noorani | Dr. Sorath Noorani   | How to examine preterm baby and management of ROP   |
| 22     | Dr. Sorath Noorani | Dr. Sorath Noorani   | Women in ophthalmology  |
| 23     | Dr. Sorath Noorani | Dr. Sorath Noorani   | Pedriatic Glaucoma surgery  |
| 24     | Dr. Sorath Noorani | Dr. Sorath Noorani   | ROP in Pakistan   |

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| 25  | Dr. Sorath Noorani               | Dr. Sorath Noorani   | Retinoblastoma   |
| 26  | Dr. Ayesha Khalid                | Dr. Ayesha Khalid  | Lymphangioma   |
| 27  | Dr. Kashif Habib                 | Dr. Kashif Habib   | Globe Perforation after retrobulbur anesthesia   |
| 28  | Dr. Rubab                        | Dr. Rubab  | PSTK and IVB combined injection in patient with DME  |
| 29  | Dr. Amna Manzoor                 | Dr. Amna Manzoor,<br>Dr. Hassan Mansoor,<br>Dr. Tayyab Afghani | Glial Heterotropia   |
| 30  | Dr. Amna Manzoor                 | Dr. Amna Manzoor   | Non-thyroidal causes of proptosis  |
| 31  | Dr. Maheen                       | Dr. Maheen   | Imploding sinus syndrome   |
| 32  | Dr. Ume Sughra                   | Dr. Ume Sughra,<br>Dr. Wajid Ali Khan<br>Fariha Munir          | Knowledge and practices of contact lens wear and care among its users in Rawalpindi, Pakistan                                |
| 33  | Dr. Ume Sughra                   | Dr. Ume Sughra   | Transgender: Stigma, Discrimination and Social Exclusion   |
| 34  | Fiza Munir                       | Fiza Munir,<br>Dr. Ume Sughra                                  | Assessment of multiple health behavior among adolescents of Rawalpindi city Pakistan   |
| 35  | Amna Baig                        | Amna Baig,<br>Dr. Ayesha Baig,<br>Ume Sughra                   | Predictors of emotional eating among private and public medical colleges students in district Rawalpindi                     |
| 36  | Iftikhar Ahmed                   | Iftikhar Ahmed,<br>Dr. Saman Waqar                             | Knowledge and Practices of Health Care Physicians regarding Childhood Malnutrition in tertiary care hospitals of Rawalpindi. |
| 37  | Fariha Munir                     | Fariha Munir,<br>Dr. Saman Waqar                               | Heavy School bags and its association with musculoskeletal problems among Adolescents of Rawalpindi                          |
| 38  | Dr. Mehak                        | Dr. Mehak,<br>Dr. Ume Sughra                                   | Knowledge of hidden hunger among healthcare professionals of Twin Cities, A cross sectional study                            |
| 39  | Dr. Khalid                       | Dr. Khalid,<br>Dr. Ume Sughra                                  | Barriers towards obtaining driving license and their association with road traffic accidents                                 |
| 40  | Saddaf Amna                      | Saddaf Amna,<br>Dr. Ume Sughra                                 | Addiction to technological gadgets and associated psycho social risk factors among college students in Rawalpindi Pakistan   |
| 41. | Fazal Noor                       | Fazal Noor,<br>Dr. Saman Waqar                                 | Prevalence of depression due to War on Terror among adult Population of south Waziristan Pakistan                            |
| 42. | Raheela Abdul Ghaffar            | Ms. Nawal Daud,<br>Ms. Hina,<br>Dr. Ume Sughra                 | Assessment of perceived stress & Job demand in General surgeons of Rawalpindi  |
| 43  | Dr. Farah Akhtar/<br>Mahmood Ali | Dr. Farah Akhtar/<br>Mahmood Ali                               | Vision related quality of Life in Pakitani subjects with early or Moderate Glaucoma  |

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|----|--------------------|--------------------|--|
| 44 | Dr. Mahmood        | Dr. Mahmood        | Comparison between selective diode cycloablation vs Ahmed Glaucoma Valve in cases of refractory glaucoma |
| 45 | Dr. Mahmood        | Dr. Mahmood        | Management of Refractory Glaucoma cases  |
| 46 | Dr. Mahmood        | Dr. Mahmood        | Outcome of various treatment modalities in neovascular glaucoma cases having visual potential            |
| 47 | Dr. Saima Jabeen   | Dr. Saima Jabeen   | Management of glaucoma in and around pregnancy   |
| 48 | Dr. Saima Jabeen   | Dr. Saima Jabeen   | Role of OCT in Glaucoma diagnosis and management   |
| 49 | Dr. Tehmina        | Dr. Tehmina        | Traboulsi syndrome case report   |
| 50 | Dr. Nadeem Qureshi | Dr. Nadeem Qureshi | Uveal coloboma associated retinal detachment   |
| 51 | Dr. Nadeem Qureshi | Dr. Nadeem Qureshi | Depot steroids in Diabetic Macular edema   |





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