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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ  
الحمد لله وحده، والصلوة والسلام على من لا نبيا بعده

## FROM THE DESK OF EDITOR IN CHIEF

With the Grace of Almighty Allah, the 4<sup>th</sup> volume, Issue-4 and overall 16<sup>th</sup> issue of **Sial Journal of Medical Sciences** is ready for you to read in the shape of print or in the form of soft copy on our website i.e. <http://www.ojs.sialjournal.com> and <https://www.sialjournal.com> (ISSN (Print): 2959-6920 & ISSN (online): 2959-6939).

The Journal is also indexed with **PakMedinet** (<https://www.pakmedinet.com/sjms/>)

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This is June-2026 issue containing some very informative articles.

Please let us know regarding our efforts to improve the quality of **Sial Journal of Medical Sciences**.

May Almighty Allah bless all of you.

## Prof. Dr. Sahibzada Masood Us Syed

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Sial Journal of Medical Sciences is the official publication of The Imran Idrees Teaching Hospital, Sialkot/ Sialkot Medical College, Sialkot. The first issue was published in September, 2022. Our journal covers clinical and research works in all aspects of medical sciences. The journal aims to contribute to cure of diseases and improvement in the health. The manuscripts are categorized as **original research articles, clinical observations, review articles, short reports, case reports and special feature articles** in the field of this journal. The journal intends to cover health as a whole in pathological, mental and social aspects. Thus the contributors are requested to send manuscripts that should meet the criteria i.e.

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2. The study **methods** are appropriate
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4. The **discussion** should contain international reference regarding results
5. The **conclusions** are reasonable and supported by the data.
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**(PEER REVIEW) FOR COMMENTS**

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<b>Similarity/ plagiarism</b>	(percentage)	

**Part-C**

	<b>Guideline</b>	<b>MARKS of this manuscript</b>
Decision	Give OVERALL MARKS you want to give to this manuscript ( Highest: 10 Lowest: 0 )  <u><b>Guideline:</b></u> Accept As It Is: 8-10 Minor Revision/ changes: 6-7 Major Revision/ changes: 3-5 Rejected (with repairable deficiencies and may be reconsidered): 1-2	

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Feedback		

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<b>Specialty</b>						
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**EDITORIAL;****MANAGEMENT OF DISASTERS LIKE FLOOD. PAKISTAN FACED TERRIBLE FLOOD CALAMITY 2025**Asma<sup>1</sup>, Masood<sup>2</sup>**Author's Affiliation:**

1. Dr. Syeda Asma Batool Bokhari, Public Health Specialist, (03008557495, bokhari\_asma@yahoo.com)

2. Prof. Dr. Sahibzada Masood Us Syed, (Certified Medical Editor, University of Health Sciences, Lahore) Chief Editor/ Chairman Editorial Board Sial Journal of Medical Sciences, Dean Research, SMC/ Imran Idrees Teaching Hospital, Sialkot. Contact # 0307-8605380, Email; sahibzadadrsyed786@gmail.com

Author contribution:

SABB; Literature search, drafting.

SMS; Conceptualization of project, literature search, writing manuscript, drafting.

**Cite this Article as:** Bokhari S.A.B, and Syed S.M.; Management of Disasters Like Flood. Pakistan Faced Terrible Flood Calamity 2025; SIAL J Med. Sci. June-2026 Volume-4, (Issue-4, Overall Issue-16):16-17**Submission completed:** January, 2026**Review began:** February, 2026**Review ended:** March, 2026**Accepted:** April, 2026**Published:** June, 2026

As of 17 September 2025, 998 people had been killed and over 1 million affected nationwide. By 10 September, another spell of monsoon swelled the numbers to 4.225 million people impacted, 1.8 million displaced, and another 46 killed, totaling to 883 killed since late June.

The 2025 Pakistan floods are a series of devastating floods triggered by heavy pre-monsoon rains in June 2025 and continuing throughout the monsoon season into September.

Natural disasters like hurricanes, earthquakes, and flooding including water and mosquito borne can cause diseases which are usually preventable like infections.

It is due to a vast ecological breakdown in the relation between humans and their environment, a serious or sudden event on such scale that the stricken community needs extraordinary efforts to cope with it, often with outside help or international aid. Disasters can strike anywhere in the world.

Three post-disaster stages

Relief, Recovery and Rehabilitation.

Stage-I Rescue	Immediate	Rescue within 01 week
Stage –II Recovery	Early	Recovery (1-4 week)
Stage –III Rehabilitation	Late)	Rehabilitation (after 04 weeks)

**Outbreak and Epidemic**

There multiple changes are seen in normal environmental ecological system. Due to floods these changes may cause increased risk of infections which are usually endemic to the area, resulting in more than usual infection in the population.

An outbreak may be defined as an increase in the number of reported infections in an area over the typical incidence rate for that type of infection. Outbreaks tend to be more localized. As an example, there have been recent reports of measles outbreaks. Epidemics, on the othe hand may be defined as the occurrence of a new or unusual infection affecting a large population

spread over an entire geographic region. An example of an epidemic may be gastroenteritis in the flood affected areas.

Outbreak of disease after disaster

1. Water and food borne disease
2. Chest diseases
3. Skin disease

The above said disease outbreak is usually due to following factors;

1. Overcrowding in camps
2. Poor sanitation
3. Infected water and food supply

Post-disaster infections

Water borne disease (Cholera), Foodborne Diseases (Leptospirosis, Hepatitis A, Hepatitis E, Bacillary dysentery, Typhoid fever), Respiratory infections (Respiratory syncytial virus, Influenza Measles, Meningitis, Pneumonia, Tuberculosis), Dermatologic infections (Staphylococcus aureus), Vector Borne Diseases (Malaria, Dengue virus, Chikungunya), Disease related to change in environment (Coccidioidomycosis).

Preventive measures

1. Vaccination
2. Shelter camps with facilities according to the weather (raining, summer, winter)
3. Safe water and food provision
4. Mosquitos and fly killer sprays
5. Medical camps for prompt and free medical treatment and management.
6. Surveillance of the diseases

### **Recommendation**

Now this is the time to make arrangements earlier to combat this calamity better than previous arrangements. The whole society including government should pay full attention in this regard and take necessary measures.

**Disclaimer:** None

**Conflict of Interest:** None

**Source of Funding:** None

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1. [https://en.wikipedia.org/wiki/2025\\_Pakistan\\_floods](https://en.wikipedia.org/wiki/2025_Pakistan_floods)
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**ORIGINAL ARTICLE****Correlation between ultrasound grading of fatty liver and body mass index (BMI)**Sarfraz Ahmad<sup>1</sup>, Javeria Aslam<sup>2</sup>

<p><b>Affiliations</b></p> <p>1. Assistant Professor Radiology, KMSMC, Sialkot.</p> <p>2. Radiologist, Commissioner Road, Sialkot 0321-4463630</p> <p><b>Corresponding Author:</b> Dr. Sarfar Ahmad, Assistant Professor Radiology, Govt. Khawaja M. Safdar Medical College, Sialkot. Contact 0321-33442221 Email; sarfrazradio@gmail.com</p> <p><b>Submission completed:</b> Jan, 2025 <b>Review began:</b> Feb, 2025 <b>Review ended:</b> Feb, 2025 <b>Accepted:</b> Feb, 2025 <b>Published:</b> June, 2026</p> <p><b>Author contribution:</b> SA: Designed the research Pattern and drafted the manuscript. JA: Data Collection, Approval</p>	<p><b>ABSTRACT</b></p> <p><b>Objective:</b> This study is conducted to assess the association between ultrasound grading (e.g grades 0-3) of liver steatosis (fatty liver) and category of BMI among adult patients.</p> <p><b>Methodology:</b> A Prospective, observational, and cross-sectional study was conducted at Allama Iqbal Memorial Teaching Hospital/ Govt. DHQ Hospital (Govt. AIMTH) a Tertiary Care Hospital. Total 250 patients aged from 18 to 70 years were included in this study. A questionnaire was prepared and data was collected accordingly for their weight, height, (BMI) and ultrasound grading of fatty liver(grades 0-3).</p> <p><b>Results:</b> By evaluating the data, it was found that out of 250 participants, 92 (36.8%) were male and 158 (63.2%) were female. Mean age was <math>43.5 \pm 12.4</math> years, mean BMI was <math>29.1 \pm 4.6</math> kg/m<sup>2</sup>. Ultrasound findings showed Grade 0 fatty liver in 42 (16.8%), Grade 1 in 84 (33.6%), Grade 2 in 78 (31.2%), and Grade 3 in 46 (18.4%) patients. A strong positive correlation (<math>r = 0.71</math>, <math>p &lt; 0.001</math>) was found between BMI and fatty liver grade. Patients with Grade 3 fatty liver had significantly higher mean BMI (<math>33.4 \pm 3.2</math> kg/m<sup>2</sup>) compared to Grade 0 (<math>24.8 \pm 2.5</math> kg/m<sup>2</sup>). Female patients were found allegedly to be more affected with steatosis than males while majority of patients fell into category of grade 1 fatty liver.</p> <p><b>Conclusion:</b> This concludes that higher BMI is strongly associated with increased ultrasound grading of fatty liver.</p> <p><b>Key words:</b> Fatty Liver Disease ,BMI, Ultrasonography, Grade, Steatosis</p> <p><b>Cite this Article as:</b> Ahmad S., &amp; Aslam J.,; Correlation between ultrasound grading of fatty liver and body mass index (BMI). SIAL J Med. Sci. J June-2026 Volume-4, (Issue-4, Overall Issue-16):18-22</p>
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**Introduction**

Fatty liver disease is characterized by excess of fatty acid and fat accumulation in hepatocytes, detectable via ultrasound grading (the first line diagnostic modality).

BMI is easy to calculate and widely used in clinical and public health settings. It does not directly measure body fat, but gives a useful estimate. It may be less accurate for athletes, elderly individuals, or people with high muscle mass<sup>1,2</sup>. The Body Mass Index (BMI) is a widely accepted indicator of body

fat and is closely related to the risk of non-alcoholic fatty liver disease (NAFLD). It is also linked with several features of metabolic abnormalities. NAFLD has grown to epidemic proportion and is currently the most common cause of abnormal liver leading to cryptogenic cirrhosis<sup>1,2</sup>.

Nonalcoholic fatty liver disease (NAFLD) develops in result of obesity and metabolic syndrome. It comprises a disease pattern which results liver cirrhosis, atherosclerosis,

cardiovascular disease (CVD), and non-alcoholic fatty liver disease NAFLD<sup>3</sup>.

Nonalcoholic fatty liver disease (NAFLD) is becoming the most common cause of chronic liver disease 2 to 30% worldwide when acids are greater than 5% of liver weight<sup>4</sup>.

Liver biopsy has been the gold standard method for diagnosis but it is of invasive nature. So, different imaging studies are used for the diagnosis. Ultrasonography having good accuracy so it detects moderate to severe degree hepatic steatosis, but not for mild steatosis<sup>5</sup>.

Many studies have demonstrated statistically significant correlation between BMI and ultrasound-detected liver steatosis grade (e.g; $r=0.60$ ;  $P<0.0001$ )<sup>6</sup>. This study is conducted to assess the association between ultrasound grading (e.g grades 0-3) and BMI among adult patients ;to evaluate the locally relevant data for prevalence of steatosis by BMI category. It may inform regional risk stratification.

**Ethics Approval;**

Ethics Committee approved this study.

**Objectives**

This study is conducted to assess the association between ultrasound grading (e.g grades 0-3) of liver steatosis (fatty liver) and category of BMI among adult patients.

**Methodology**

The study design was prospective descriptive and open labeled survey conducted using specifically design questionnaire. It was conducted in Allama Iqbal Memorial Teaching Hospital/ KSMC, Sialkot. The study included data of 250 patients to reach at a specific conclusion that how BMI affects the grades of fatty liver on ultrasound. Patients of either sex with age limit of above 18 years but below than 70 years who come for abdominal ultrasound for any clinical indication were included.

Patients suffering from chronic liver disease (cirrhosis, viral hepatitis etc) and pregnant women were excluded.

The details of phenomena were noted down. On the completion of study, the questionnaires were analyzed by using Pearson’s correlation coefficient and chi square test to obtain the result<sup>6</sup>.

**Results**

All of the collected data was transferred to Microsoft Excel and their results were finalized with the help of Pie Charts and graphs.

The various parameters analyzed are as follows:

Gender Distribution:

Gender	Number Of Patients	Percentage
Female	158	63.2%
Male	92	36.8%

Table;1

Total 250 patients 158 were female while 92 patients were male as shown in Fig.1.

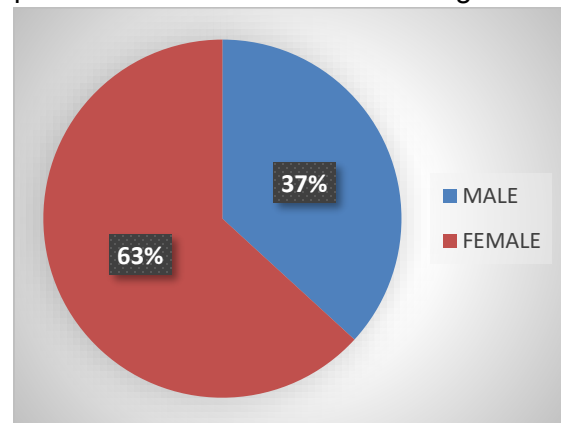


Figure: 1 (Gender Distribution)

Age Distribution:

Out of 250 patients 74 were below 30 years, 84 were between 30 years to 45 years and

**CORRELATION BETWEEN ULTRASOUND GRADING OF FATTY LIVER AND BODY MASS INDEX (BMI).**

92 were above 45 years of age as shown in Fig. 2.

Age	Number Of Patients	Percentage
<30 years	74	29.6%
30 to 45 years	84	33.6%
>45 years	92	36.8%

Table:2

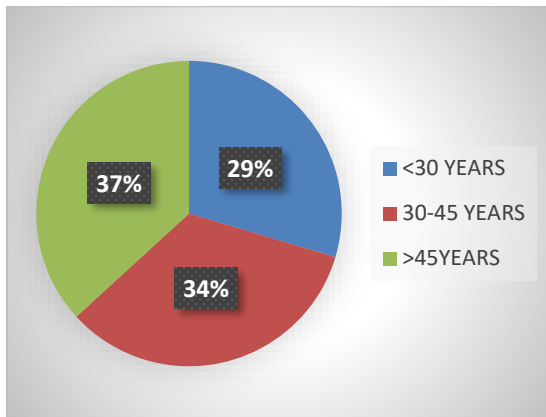


Figure: 2 (Age Distribution)

Was the patient obese?

As obesity has a major role in advanced grade of fatty liver so it was necessary to consider this point in the research.

Out of 250 patients 110 were obese as shown in Fig. 3.

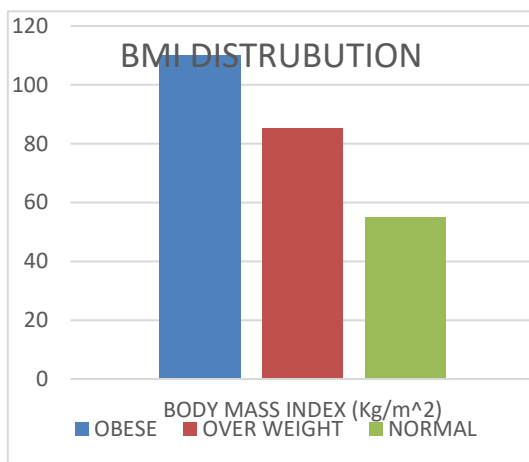


Figure:3 (BMI Distribution)

**ULTRASOUND GRADING:**

**CORRELATION BETWEEN ULTRASOUND GRADING OF FATTY LIVER AND BODY MASS INDEX (BMI).**

Out of 250 patients;  
 Grade 0: 42 patients(16.8%)  
 Grade1: 84 patients(33.6%)  
 Grade2 :78 patients(31.2%)  
 Grade3 :46 patients(18.4%)

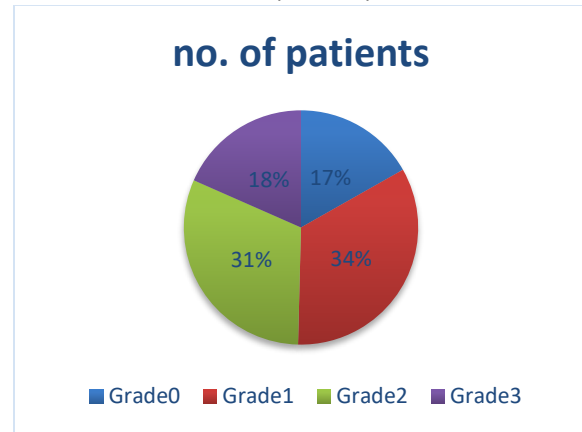


Figure:4 Ultrasound Grading

Higher BMI suggests the advanced grade of fatty liver; so as the chances of progression to liver fibrosis that ultimately leads to liver fibrosis and cirrhosis.

Grade 1 constitutes the point where hepatic echogenicity is slightly increased than normal.

Grade 2 constitutes where echogenic walls of portal vein branches are not visible.

Grade 3 where highly echogenic liver parenchyma obscures the outline of diaphragm.

**Discussion**

According to the data collected, fatty liver disease was aggravated by high BMI value. Many studies have demonstrated statistically significant correlation between BMI and ultrasound-detected liver steatosis grade (e.g ; r=0.60; P<0.0001)<sup>7,8,9</sup>.

This study demonstrates a strong positive correlation between BMI and ultrasound grading of fatty liver. The results align with previous literature showing obesity as a major risk factor for NAFLD<sup>10</sup>.

Our data show that patients with Grade 3 fatty liver had a mean BMI in the obese

range, supporting the concept that higher body fat leads to increased liver fat deposition.

These findings have the important clinical implications. Since the BMI is simple to measure, it could be used for the early screening to identify individuals at high risk for the fatty liver, even before advanced imaging or liver biopsy is considered.<sup>4,11,12</sup>

A study conducted in 2021 by Lee,B. also suggests that obesity is major risk factor in increasing steatosis grade; which corresponds with our research work which is in agreement with our study<sup>13</sup>.

### **Conclusion:**

This concludes that higher BMI is strongly associated with increased ultrasound grading of fatty liver.

### **Limitations**

Limitations include reliance on ultrasound (operator dependent) and lack of liver biopsy confirmation.

### **Recommendation**

Routine BMI measurement can help in early detection of patients at risk for advanced fatty liver disease, enabling timely lifestyle and dietary interventions.

BMI can be used as a simple screening tool for fatty liver risk, particularly in overweight and obese populations. Public health interventions targeting weight reduction may help mitigate fatty liver disease progression. However, BMI alone may not capture metabolic risk in lean individuals with Non-Alcoholic Fatty Liver Disease (NAFLD, "lean NAFLD"), and future studies should also consider waist circumference and metabolic parameters.

**Disclaimer:** None

**Conflict of Interest:** None

**Source of Funding:** None

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**ORIGINAL ARTICLE****Effect of Chronic Work Stress on Overall Health; A meta-analysis**

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**Author contribution:**

MMS; Conceptualization of project,  
literature search, writing manuscript,  
drafting.

**Abstract**

**Objectives:** This comprehensive research project aims to: 1) Synthesize the current global and local scientific literature on the physiological and psychological sequelae of chronic work stress; 2) Elucidate the evidence-based associations between work stress and specific health outcomes, including cardiovascular disease, metabolic disorders like type 2 diabetes, and mental health conditions such as depression, anxiety, and burnout syndrome; and 3) Evaluate the resultant socioeconomic burdens on healthcare systems and organizations, while also reviewing the efficacy of existing preventive and interventional strategies.

**Methodology:** A systematic narrative review methodology was employed. Major academic databases—including PubMed, PsycINFO, Scopus, and Web of Science—were searched for peer-reviewed articles, meta-analyses, and systematic reviews published between 2000 and 2023. Both global and regionally-specific studies were included to provide a comprehensive perspective. The findings were analyzed thematically to identify consistent patterns, mechanisms, and gaps in the literature.

**Results:** The review confirms a strong and consistent body of evidence linking chronic work stress to detrimental health outcomes. Key findings include: a significantly elevated risk for hypertension, atherosclerosis, and acute cardiovascular events; a pronounced correlation with the development of insulin resistance and type 2 diabetes; and a high prevalence of major depressive disorder, anxiety disorders, and clinical burnout. The socioeconomic analysis reveals substantial costs related to absenteeism, presenteeism, employee turnover, and rising healthcare expenditures. While organizational interventions (e.g., job redesign, stress management programs) show promise, their implementation remains inconsistent.

**Conclusion:** Chronic work stress is a formidable etiological agent in the development of both physical and mental illness, with profound human and economic costs.

**Keywords:** Chronic Work Stress; Occupational Health; HPA Axis; Hypercortisolemia; Burnout; Cardiovascular Disease; Mental Health; Socioeconomic Burden; Workplace Interventions.

**Cite this Article as:** Shahid M.M.; Effect of Chronic Work Stress on Overall Health; A meta-analysis. *SIAL J Med. Sci. June-2026 Volume-4, (Issue-4, Overall Issue-16):23-27*

**Introduction**

In contemporary global economy, chronic work stress has emerged as a pervasive and critical determinant of employee, health and organizational performance. Prolonged exposure to psychosocial stressors in the

workplace can lead to a persistent state of physiological dysregulation. This is primarily mediated through the over-activation of the hypothalamic–pituitary–adrenal (HPA) axis, resulting in a cascade of adverse effects including hypercortisolemia, systemic infla-

mmation, immune suppression, and autonomic nervous system imbalance. These pathological mechanisms are established precursors to a wide spectrum of serious health conditions, posing a significant challenge to public health systems and economies worldwide<sup>1</sup>.

Work-related stress has emerged as one of the most prevalent and challenging occupational health issues of the 21<sup>st</sup> century. It is defined by the World Health Organization as the harmful physical and the emotional responses that occur when the requirements of the job do not match the capabilities, resources, or needs of the worker. When this state becomes chronic, it poses a severe threat to individual well-being and organizational health on a global scale. Current estimates suggest that nearly one in three workers worldwide experience high levels of psychological stress. World Health Organization further attributing approximately 20% of all disability-adjusted life years (DALYs) lost to stress-related factors<sup>2</sup>.

The situation in Pakistan reflects this alarming global trend. Recent studies conducted in major urban centers like Lahore & Karachi indicate a high prevalence of work stress across various sectors. Findings reveal that over 40% of healthcare workers and 35% of corporate employees report symptoms of chronic occupational stress. The consequences extend beyond individual suffering, manifesting as decreased productivity, increased absenteeism, and a contributing role in the country's rising rates of non-communicable diseases, including hyper-tension, coronary artery disease, and the mental health disorders<sup>3</sup>.

Studying chronic work stress is significant for both public health and clinical medicine. Stress-related illnesses are not confined to individual suffering but extend to reduced

workplace productivity, increased absenteeism, and higher healthcare costs.

In Pakistan, where the healthcare system is already overburdened, addressing stress-induced disorders can reduce the load of non-communicable diseases, which account for 58% of total deaths. Understanding these associations will aid in prevention, early diagnosis, and management strategies for at-risk populations<sup>4</sup>.

#### **Objectives:**

Primary Objective of this research was to analyze the effect of chronic work stress on overall health.

Secondary Objectives:

- To evaluate associations between stress and cardiovascular, metabolic, and mental health disorders.
- To examine prevalence trends globally and in Pakistan.
- To explore the socio-economic impact of stress-related illnesses.
- To propose preventive and management strategies for chronic work stress.

#### **Methodology**

This research employed a narrative literature review design. This methodology was selected to provide a comprehensive, qualitative synthesis and critical analysis of the existing body of knowledge on chronic work stress and its health outcomes, drawing from a wide range of sources and study types.

A purposive sampling strategy was utilized to identify relevant literature.

The final sample consisted of 78 peer-reviewed articles, systematic reviews, and meta-analyses that met the predefined inclusion criteria.

#### **Inclusion Criteria:**

- Publication Type: Peer-reviewed journal articles, systematic reviews, and meta-analyses.

- Time Frame: Studies published between January 2010 and December 2023 to ensure the relevance of findings.
- Focus: Primary focus on chronic occupational stress, its pathophysiology (e.g., HPA axis dysregulation), and its associated physical and mental health outcomes.
- Geography: Both international and Pakistan-specific studies were included to allow for a global context and local relevance.
- Language: Articles published in English or Urdu.

**Exclusion Criteria:**

Publications that were not peer-reviewed (e.g., editorials, letters, conference abstracts without full papers).

- Studies focusing exclusively on acute, short-term stress responses.
- Articles where the full text was not accessible.
- Publications in languages other than English or Urdu.

**Data Collection:** Data was collected through a systematic search of electronic databases including Centers for Disease Control and Prevention (CDC) databases, PubMed, World Health Organization (WHO) repository, PakMediNet, and Scopus. The search was conducted using a combination of the following keywords and Boolean operators: "chronic work stress" OR "occupational stress" AND "HPA axis" OR "cortisol" AND "cardiovascular risk" OR "hypertension" OR "depression" OR "burn-out" AND "Pakistan". The reference lists of retrieved articles were also hand-searched to identify any additional relevant studies.

**Analysis Tools:** The data analysis was qualitative and thematic. The extracted information from the selected studies was synthesized and organized into the key thematic areas (e.g., physiological path-

ways, cardiovascular outcomes, mental health outcomes, socioeconomic impact, interventions). A narrative approach was used to summarize, interpret, and critically discuss the findings within these themes.

**Ethical Approval:** This research did not require new ethical approval.

**Results**

Global and Local Data on Work Stress

Distribution of Health Problems from Chronic Work

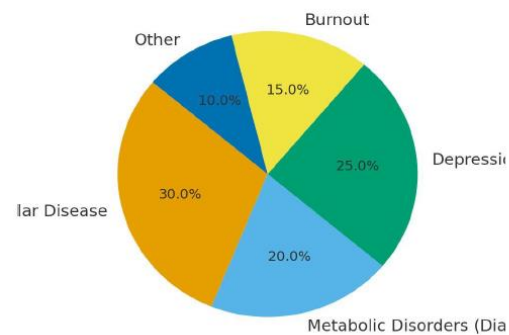


Figure 1: Distribution of major health problems linked with chronic work stress (WHO 2022).

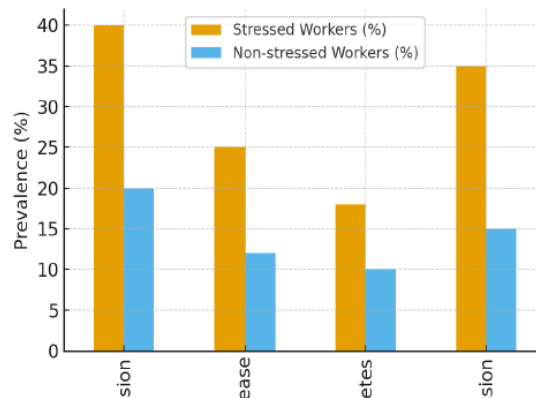


Figure 2: Comparative prevalence of diseases in the stressed vs non-stressed workers (European Heart Journal 2021, Pakistan Journal of Medical Sciences 2023).

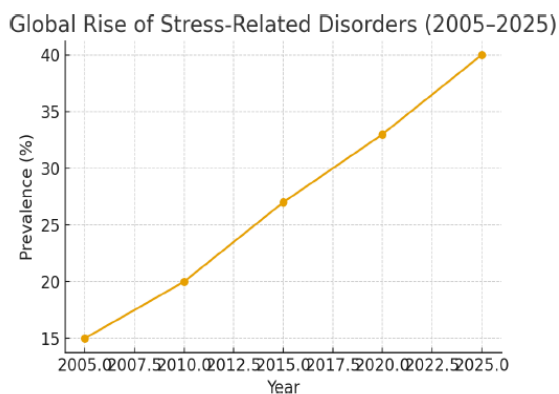


Figure 3: Global rise of stress-related disorders (2005–2025).

Study	Population	Outcome	Findings
Kivimäki et al., 2021	Europe	Cardiovascular Disease	Stress CVD risk by 40%
Nyberg et al., 2019	Multi-country	Diabetes	Stress diabetes risk (RR 1.3)
Shahid et al., 2023	Pakistan (healthcare workers)	Burnout	Prevalence 46%
WHO Report, 2022	Global	Mental Health	Stress linked with 2.5x depression risk

Table-I

**Discussion**

This comprehensive review establishes that the chronic work stress functions as a significant etiological factor with demonstrable and consistent adverse outcomes across physical, psychological, and socio-economic domains. The pathophysiological evidence conclusively links sustained stress to the development of hypertension, atherosclerosis, and insulin resistance, forming a direct pathway to cardiovascular and metabolic disease. Concurrently, the psychological sequelae are profound, markedly predisposing individuals to major depressive

disorder, anxiety disorders, and the clinical burnout syndrome.

Data from the Pakistani context, while limited, reveals a troubling alignment with these global patterns, identifying healthcare professionals, bankers, and the IT sector employees as particularly high-risk cohorts<sup>3,4</sup>.

The resultant economic burden is substantial, translating into billions of dollars lost annually worldwide through escalated healthcare expenditures, absenteeism, and diminished productivity<sup>5,6,7</sup>.

This convergence underscores the universal and transcultural nature of work stress as a determinant of health. Addressing this multifaceted public health challenge necessitates a multi-level approach. Effective mitigation strategies must integrate organizational-level interventions (such as workload redistribution and the flexible work schedules), promote individual-level coping mechanisms (including regular exercise and mindfulness-based practices), and incorporate health-care-system approaches (like the routine screening for stress-related symptoms in occupational health settings).

Proactive, evidence-based interventions are not merely a corporate wellness option but an urgent imperative for safeguarding population health and ensuring the economic stability<sup>8,9</sup>.

**Conclusion:**

This review concludes that chronic work stress is a critical determinant of population health, with a established causal role in the development of cardiovascular disease, metabolic syndrome, and mental illness. The replication of international trends within the Pakistani context confirms its global public health relevance.

**Recommendation**

This review underscores the urgent need for chronic work stress to be recognized not

merely as an individual concern but as a definitive public health and organizational priority. Mitigating this issue requires a multi-level approach, integrating individual resilience-building with systemic, organizational changes to create healthier work environments. Future research should focus on longitudinal studies and the development of culturally-adapted, evidence-based interventions.

Consequently, a strategic shift towards evidence-based, comprehensive interventions—spanning organizational, individual, and policy domains—is essential to effectively reduce the burden of stress-related disease and improve overall health outcomes.

### Limitations

Despite its comprehensive scope, this review is subject to several limitations. Firstly, the inclusion of only peer-reviewed, published literature may introduce the potential for publication bias, as studies with null or insignificant findings often remain unpublished. Secondly, the inherent heterogeneity in the methodologies and instruments used to define and measure chronic work stress across different studies poses a challenge for the direct comparability of results. Furthermore, the reliance on studies available in English or Urdu may have excluded relevant research published in other languages.

Nevertheless, the consistent convergence of findings across diverse geographical and occupational populations strengthens the

validity and generalizability of the central conclusions.

**Disclaimer:** None

**Conflict of Interest:** None

**Source of Funding:** None

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**ORIGINAL ARTICLE****Prospective KAP study of Working Mothers regarding Feeding Their Children**

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**Introduction**

Infant feeding practices play important role in growth and development and overall health. A global target of increasing exclusive breastfeeding at least 50% by the year 2025 was set by WHO for infants under 6 months. However many mothers introduce supplementary foods before 6 months. Breast milk provides all necessary nutrients and antibodies to support the infant's immune system and development<sup>1</sup>. WHO and UNICEF recognized and recommended exclusive breastfeeding for up to 6 months. Breast milk contains essential nutri-

ants and antibodies that are very essential for infant's health and immunity and also for infant's growth and development. It is also noted that the breastfed infants experience fewer infections and chronic illness compared to those fed on formula or other supplements<sup>2</sup>.

Exclusive breastfeeding rates are very low all over the world but as compared to West this ratio is low in Pakistan. In Pakistan, national surveys indicate that while most mothers initiate breast feeding but this practice declines with time and it becomes

very less at the end of 4 month and in some cases at the end of 5<sup>th</sup> month<sup>3</sup>.

Education plays very important role in breastfeeding, mothers with high education are most likely to breastfed their child for the first 4 months at least, as compared to those with less education<sup>3</sup>.

Antenatal and post natal counseling also plays important role in mothers knowledge and produce awareness among societies.

There are so many researches that explored feeding practices in 1 year of life or up to six months. This limited research focuses only on (1 to 4) months, so doesn't highlight the unique challenges faced during the first few months<sup>3</sup>.

**Objectives**

The present study aimed to access the mother's exclusive breastfeed actual weaning and feeding knowledge and practices used with their infants and the factors influencing mothers for the choice of feeding methods.

**Methodology**

A prospective study was carried out on registered patients presented in Allama Iqbal Memorial Teaching Hospital/ KMSMC, Sialkot in the OPD and in KMSMC Officers during the month of February, 2025 and 60 mothers were included in sample according to convenience sampling technique.

**Results**

Educational level of mother :

About 95% of mothers had higher education (which included consultants, working House officers, medical officers, professors, nurses etc)

About 5% had no education at all which included the mothers from sweeping staff.

Primary method of feeding:

About 61 % mothers exclusively breastfed their infant, about 8% exclusively used formula milk and about 30% used both breast-milk and formula combined.

Frequently of how often infant was fed:

Almost 92% mothers fed their infant every 2-3 hours and only 8% of them were feeding on demand or less than that interval.

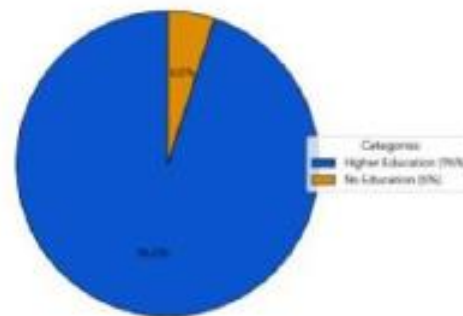
The belief that exclusive breastfeeding is sufficient for first 4 months or not :

Almost 94 % mothers agreed on fact that breastfeeding is sufficient for their infant in initial months but 6% contraindicated on this belief.

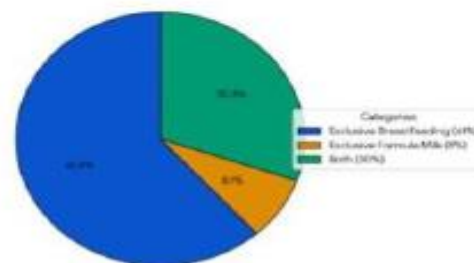
Whether they received guidelines on feeding practices:

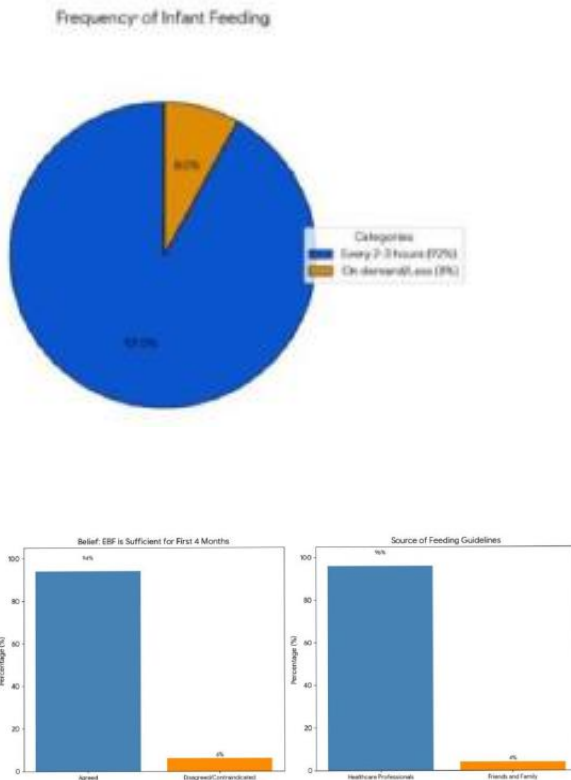
About 96% received guidelines from both healthcare professionals and 4% received advices from friends and family.

Educational Level of Mother



Primary Method of Feeding (Total = 99%)





**Discussion**

We found that the 95% mothers having higher education and give their babies breastfeeding at home and expressed breast milk is given at home when they are on duty so the 61% of babies are getting exclusive breast feed.

About 95% of mothers had higher education, about 5% had no education at all, about 61 % mothers exclusively breastfed their infant, almost 94 % mothers agreed on fact that breastfeeding is sufficient for their infant in initial months but 6% contraindicated on this belief and About 96% received guidelines from both healthcare professionals and 4% received advices from friends and family.

Finding of our study our study match with the finding of Jain A. et al., Haris AB et all. and Hua J. et al.<sup>4,5,6</sup>

**Conclusion**

Almost all mothers agreed that breast-feeding was sufficient for their infant since they that had proper guidelines due to their educational status and work place but since they had to work for consecutive hours , so they couldn't breastfeed their infant at regular intervals and most had to use formula milk too.

**LIMITATIONS:**

This study focuses only on one to 4 months of infants, so it will not cover older infants and result is limited due to sample size.

**Disclaimer:** None

**Conflict of Interest:** None

**Source of Funding:** None

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**ORIGINAL ARTICLE****RETROSPECTIVE STUDY OF CULTURAL SENSITIVITY PATTERN OF URINE FOR PAST ONE YEAR IN IMRAN IDREES TEACHING HOSPITAL LAB**

Muhammad Kaleem<sup>1</sup>, Jawad Saeed<sup>2</sup>, Huraira Irfan<sup>3</sup>, Hussain Shahid<sup>4</sup>, Mudassir Razzaq<sup>5</sup>, Mughees Khalid<sup>6</sup>, Usama<sup>7</sup>, Muneeb Haider<sup>8</sup>, Zain Azhar<sup>9</sup>

<p><b>Affiliations</b> 1-9 4<sup>th</sup> Year MBBS students, Sialkot Medical College, Sialkot</p> <p><b>Corresponding Author:</b> Mr. Muhammad Kaleem, 4<sup>th</sup> Year MBBS students, Sialkot Medical College, Sialkot Cell No. 0323-6562568 Email. Kaleem658@gmail.com</p> <p><b>Submission complete:</b> March, 2025 <b>Review began:</b> April, 2025 <b>Review ended:</b> May, 2025 <b>Acceptance:</b> May, 2025 <b>Published:</b> June, 2026</p> <p><b>Author contribution:</b> 1-2; Designed the research Pattern and drafted the manuscript. 3; Draft the manuscript 4-8; Data Collection 9; Approval</p>	<p><b>ABSTRACT</b></p> <p><b>Objectives:</b> To assess the Cultural sensitivity pattern of urine for the year of 2024 in IITH lab.</p> <p><b>Methods:</b> A retrospective study was carried out on registered patients presented in IITH during the year 01-01-2024 to 31-12-2024.</p> <p><b>Results:</b> Out of 181 samples (83 males, 98 females), 60 (33%) were culture positive. The most common isolates were E. coli (43%) and Klebsiella (40%), followed by Pseudomonas, Proteus, and a few others in low frequency. Antibiotic sensitivity patterns showed high effectiveness of Meropenem (91.2%) and Imipenem (90%), followed by Amikacin (74.5%) and Gentamycin (73.3%). In contrast, high resistance was noted against fluoroquinolones (Ciprofloxacin, Levofloxacin, Norfloxacin) and Co-trimoxazole, making them less reliable treatment options.</p> <p><b>Conclusion:</b> This highlights the predominance of E. coli and Klebsiella in infections and the rising concern of multidrug resistance, with carbapenems remaining the most effective agents.</p> <p><b>Keywords:</b> E.Coli, Klebsiella, Pseudomonas, Proteus, Meropenem, Imipenem, Amikacin</p> <p><b>Cite this Article as:</b> Kaleem M et al.,; Retrospective Study of Cultural Sensitivity Pattern of Urine for Past One Year in Imran Idrees Teaching Hospital Lab. SIAL J Med. Sci. June-26 Volume-4, (Issue-4, Overall Issue-16); 32-37</p>
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**Introduction**

Urinary tract infections (UTIs) remain among the most frequently encountered bacterial infections in both community and healthcare settings. They affect individuals across all age groups, with higher prevalence in females, elderly populations, and patients with underlying medical conditions. Accurate diagnosis and effective treatment of UTIs rely heavily on the laboratory's ability to isolate causative organisms and determine their antimicrobial susceptibility patterns. Over recent decades, the emergence of multidrug-resistant uropathogens has complicated

therapeutic decision-making, under-scoring the need for continuous local surveillance of resistance trends.<sup>1</sup>

Culture and sensitivity testing of urine specimens provides crucial data for guiding the empirical therapy and monitoring the effectiveness of infection control strategies. The pattern of antimicrobial susceptibility is not static; it evolves in response to antibiotic prescribing habits, patient demographics, and regional epidemiology. Hence, periodic review of laboratory records serves not only as a quality assurance measure but also as an early warning system for emerging resistance.<sup>2</sup>

The IITH lab, serving a diverse patient population, routinely processes the urine samples for bacterial culture and antimicrobial sensitivity. By reviewing results from the past one year, valuable insights can be gained into the prevailing uropathogens, their resistance patterns, and potential shifts in susceptibility profiles. Such data hold practical significance for the clinicians in selecting appropriate empiric therapy, as well as for the public health stakeholders in formulating the antibiotic stewardship interventions.<sup>3</sup>

This study focuses on analysing the cultural sensitivity patterns of the urine samples processed in the IITH laboratory over the last twelve months. Through systematic evaluation of archived laboratory data, the research aims to identify predominant bacterial isolates, assess their resistance trends, and compare findings with established guidelines. In doing so, it contributes to evidence-based management of UTIs within the institution and broader healthcare context.

In urine culture and sensitivity analysis, "TYPES" may refer to several key aspects observed during laboratory processing. These include the types of organisms isolated from urine samples, such as *Escherichia coli*, *Klebsiella* species, *Proteus* species, *Enterococcus* species, and other less common uropathogens. Each organism type carries distinct clinical significance and may demonstrate different susceptibility or resistance patterns to antimicrobial agents. Additionally, types can also reflect patterns of the sensitivity and resistance recorded against various antibiotic groups, such as beta-lactams, fluoroquinolones, aminoglycosides, and nitrofurantoin. Recognising the distribution of both organism types and their corresponding sensitivity profiles is essen-

tial for understanding the local epidemiology of urinary tract infections.

By categorising these types from the past year's IITH laboratory data, this research aims to highlight which pathogens are most prevalent and which antimicrobial classes remain effective, thereby providing practical insights for empirical therapy selection and resistance prevention strategies.<sup>4,5</sup>

### **Objectives**

To assess the Cultural sensitivity pattern of urine for past one year in IITH lab.

### **Methodology**

This is a retrospective descriptive study conducted at the IITH laboratory, focusing on the analysis of urine culture and antimicrobial sensitivity results from the past twelve months of .all the urine samples submitted for culture and sensitivity testing between 01-01-2024 to 31-12-2024 were included in the initial dataset. Duplicate samples from the same patient within a short interval, yielding the same organism and sensitivity pattern, were excluded to avoid bias.

### **Ethical Considerations;**

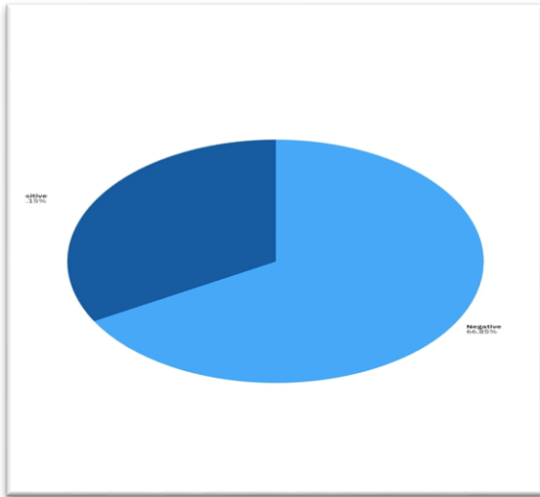
Patient confidentiality was maintained by anonymising all records before analysis. No direct patient contact or intervention was involved in this study. So there was no need to get permission from Ethic Review Board.

### **Results**

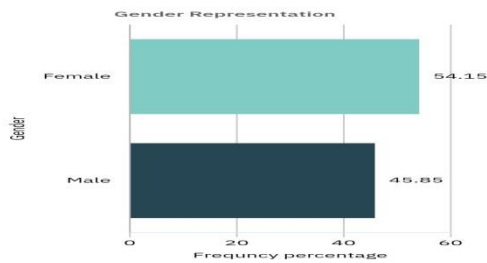
Total Samples = 181

Positive = 60

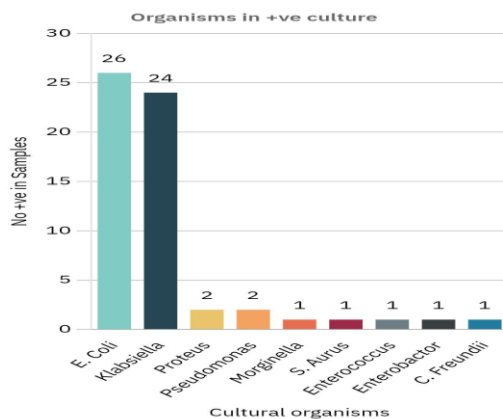
Negative = 121



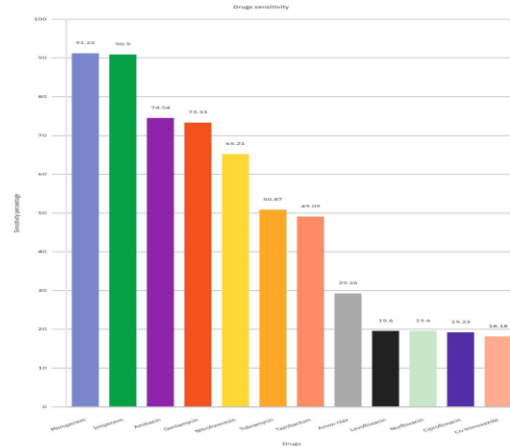
Gender:  
Male = 45.85%  
Female = 54.15%



Graphic Representation of organisms positive in cultural samples



Drugs Sensitivity Graphic Representation



Total patients	+ve patients	-ve patients	+ve Percentage
181	60	121	33.15%

Gender:

Gender	No. of patients	percentage
Male	83	45.85%
Female	98	54.14%

Organisms in +ve samples:

Organisms	No in +vs samples	Percentage
E. Coli	26	43%
Klebsiella	24	40%
Pseudomonas	03	5.0%
Proteus	02	3.3%
C. Freundii	01	1.6%
Enterobactor	01	1.6%
Enterococcus	01	1.6%
S. Aurus	01	1.6%
Morganella	01	1.6%

**Drugs Sensitivity and Resistance:**

	<b>Drugs</b>	<b>Sensitive</b>	<b>Resistant</b>
<b>1</b>	Meropenem	52	05
<b>2</b>	Imipenem	50	05
<b>3</b>	Amikacin	41	14
<b>4</b>	Gentamycin	33	12
<b>5</b>	Nitrofurantoin	30	16
<b>6</b>	Tobramycin	29	28
<b>7</b>	Tazobactam	27	28
<b>8</b>	Amox-clav	12	29
<b>9</b>	Ciprofloxacin	10	42
<b>9</b>	Levofloxacin	10	41
<b>9</b>	Norfloxacin	10	41
<b>9</b>	Co-trimoxazole	10	45

**Discussion**

During the one-year study at IITH lab, 181 urine samples were processed, of which 60 (33%) showed positive growth. Females had a slightly higher positivity, in line with the known higher risk of urinary tract infections. The most frequent isolates were *E. coli* (43%) and *Klebsiella* (40%), followed by less common organisms such as *Pseudomonas*, *Proteus*, *Citrobacter*, *Enterobacter*, *Enterococcus*, *S. aureus*, and *Morganella*. Antibiotic sensitivity patterns indicated that carbapenems (Meropenem, Imipenem) and aminoglycosides (Amikacin, Gentamycin) remain the most effective therapeutic options. In contrast, the high resistance was observed against fluoro-

quinolones and Co-trimoxazole, limiting their empirical use.

This study highlights the predominance of *E. coli* and *Klebsiella* as uropathogens and underlines the growing challenge of antimicrobial resistance. Continuous surveillance of the sensitivity patterns and the strict implementation of antibiotic stewardship are essential to guide the empirical therapy and prevent further resistance escalation<sup>6</sup>.

UTIs are among the most common bacterial infections worldwide. The higher prevalence was found in females due to the anatomic and the hormonal factors. Complicated UTIs are more frequent in the males, elderly, diabetics, and catheterized patients. Urine culture with antimicrobial sensitivity testing remains the gold standard for diagnosis<sup>7, 8</sup>.

*Escherichia coli* (*E. coli*) → Most prevalent pathogen globally and regionally. *Klebsiella pneumoniae* → Second most frequent, often linked to hospital-acquired infections. Non-fermenters (*Pseudomonas*, *Acinetobacter*) → Associated with prolonged hospitalization and prior to the use of antibiotics. *Proteus* & *Morganella* → Linked with stone disease due to urease activity. *Enterococcus* species → Common in the complicated and device-associated infections. *Staphylococcus saprophyticus* → Seen in community-acquired UTIs in the young females<sup>9</sup>.

High resistance reported against; Fluoroquinolones (ciprofloxacin, levofloxacin, norfloxacin). Co-trimoxazole. ESBL-producing *E. coli* and *Klebsiella* → Resistant to third-generation cephalosporins, often multidrug-resistant. Carbapenems (Meropenem, Imipenem) → Remain highly effective but the resistance is emerging (CRE threat). Nitrofurantoin → Retains good activity for uncomplicated UTIs, especially against *E. coli*. Aminoglycosides (Amikacin, Gentamicin) → Show good sensitivity for complicated UTIs.<sup>9</sup>

Empirical treatment should be based on local antibiograms. De-escalation to narrow-spectrum antibiotics is critical once culture results are available. Fluoroquinolones should be avoided in high-resistance areas. Carbapenems should be preserved for severe infections to prevent resistance spread. Preventive measures like catheter stewardship and infection control are equally important.<sup>10</sup>

The predominance of *E. coli* and *Klebsiella* matches global and regional reports. High resistance to the fluoroquinolones and the co-trimoxazole aligns with the South Asian surveillance data<sup>10</sup>.

Carbapenems and amino-glycosides remain effective, supporting their role in therapy. Annual or biannual local anti-biogram updates are necessary to guide the empirical therapy and the stewardship practices.

We discussed different international studies and found our findings in agreement with the figures.

### Conclusion

This highlights the predominance of *E. coli* and *Klebsiella* in infections and the rising concerns of multidrug resistance, with the carbapenems remaining the most effective agents.

### LIMITATIONS:

Main limitation is low number of cases in the hospital. We did not have enough time for our study as far as it is concerned. Unavailability of resources was another limitation which cannot be underestimated.

Little experience in the use of electronic media and difficulty in making the soft copy of research papers We faced shortage of resources and time due to academic commitments and other multiple responsibilities such as lectures, clinical rotations, weekly evaluations and other extra-curricular activities. To be more specific,

complete age and gender related data was unavailable in the hospital records.

**Disclaimer:** None

**Conflict of Interest:** None

**Source of Funding:** None

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**ORIGINAL ARTICLE****Varicocele Surgery: Retroperitoneous High ligation VS Inguinal ligation****outcome**

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<p><b>Affiliations</b> Consultant Surgeon, Bashir Health Services, Sialkot</p> <p><b>Corresponding Author:</b> Dr. Hafiz Gulfam, Consultant Surgeon, Bashir Health Services, Sialkot Cell No. 03328399142 Email. Dr.gulfamofficial@gmail.com CNIC 34602-5878847-7</p> <p>Submission complete: April, 2026 Review began: April, 2026 Review ended; May, 2026 Acceptance: May, 2026 Published: June, 2026</p> <p><b>Author contribution:</b> HG; Designed the research Pattern and drafted the manuscript, literature search, writing manuscript, drafting,</p>	<p><b>ABSTRACT</b></p> <p><b>Objective:</b> Objective of this study was to compare outcomes between two procedures while focusing on cause and effect association.</p> <p><b>Methodology:</b> Prospective comparative study was conducted to evaluate outcomes of inguinal ligation versus high ligation in patient undergone surgical treatment for varicocele at Bashir Hospital Sialkot from January, 2026 to March, 2026.</p> <p><b>Result:</b> There were 30 patients who underwent varicocele surgery. Retroperitoneal high ligation was performed on 15 patients, and inguinal ligation was performed on 15 patients. Recurrence was more common in patients who underwent the inguinal ligation procedure. The 2 patients reported recurrence in inguinal ligation and 1 in high ligation. The complication of pain was present in 33.33% of 15 patients who had undergone high ligation and 10% who had undergone inguinal ligation. The complication of infection was present in 3 patients, of whom 1 patient had undergone high ligation and 2 patients had undergone inguinal ligation.</p> <p><b>Conclusion:</b> This concludes that retroperitoneal high ligation is slightly better option except complain of pain.</p> <p><b>Key words:</b> Varicocele Surgery, Retroperitoneous High ligation, Inguinal ligation</p> <p><i>Cite this Article as: Gulfam H.; Varicocele Surgery: Retroperitoneous High ligation VS Inguinal ligation outcome. SJAL J Med. Sci. June-2026 Volume-4, (Issue-4, Overall Issue-16):38-41</i></p>
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**Introduction**

A varicocele is defined as the abnormal painful dilation of the pampiniform venous plexus in the scrotum in males. It is mostly known as 'pelvic compression syndrome'. Although varicocele is treated with many different modalities, however, it is accepted that surgical treatment is the most effective method. Various surgical approaches have been used. The high retroperitoneal approach and laparoscopic approach can be performed for internal spermatic vein ligation. The inguinal approach and subinguinal approach can be used to ligate the external spermatic veins. The best treatment modality for varicocele can be chosen only after comparing the laparoscopic high ligation vs inguinal ligation<sup>1,2</sup>.

The laparoscopic high ligation is done retroperitoneally; involving an incision above the inguinal canal. Inguinal ligation is performed by incision within inguinal canal. Approxi-

mately 15% of adult males are believed to have clinical or subclinical varicoceles but prevalence in infertile males is as high as 40%.<sup>1,2</sup>

A comparative analysis of the clinical outcomes and complication profiles between laparoscopic high ligation surgery and laparoscopic high inguinal varicocelectomy (laparoscopic high inguinal varicocelectomy) indicates distinct advantages for the laparoscopic approach<sup>1,2</sup>.

Twelve months post-intervention, significant improvements in seminal parameters were observed. Specifically, 46.61% of patients in the laparoscopic high inguinal varicocelectomy cohort experienced an increase in total motile sperm count exceeding 50%, compared to 34.05% in the laparoscopic high ligation group. The data suggests that laparoscopic high inguinal varicocelectomy correlates with superior sperm motility and higher overall pregnancy rates<sup>1,2</sup>.

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The study identified a statistically significant difference in the incidence of postoperative hydrocele. The rates were recorded as follows:

- High Ligation Group: 9.09%
- laparoscopic high inguinal varicocelectomy Group: 0.69%

In addition to a lower incidence of hydrocele formation, laparoscopic high inguinal varicocelectomy demonstrated reduced recurrence rates compared to traditional laparoscopic high ligation. Given its superior efficacy in improving fertility markers and its favorable safety profile, laparoscopic high inguinal varicocelectomy is recommended as the preferred surgical technique for the treatment of varicocele.<sup>1,2</sup>

A comparative study assessing retroperitoneal laparoscopic high ligation against subinguinal varicocelectomy investigated the therapeutic impact of these techniques on patients suffering from painful varicoceles. Diagnostic consistency was maintained across the cohort through the dual application of physical examinations and color Doppler ultrasonography<sup>1,2</sup>.

Regarding the alleviation of chronic scrotal pain, the retroperitoneal varicocelectomy group achieved a complete success rate of 80%, while the subinguinal varicocelectomy group reported a success rate of 71%. Furthermore, partial symptomatic relief was observed in 11% of the retroperitoneal subjects compared to 18% in the subinguinal ligation group<sup>2</sup>.

The objective of this study is to delineate the various surgical approaches to varicocele treatment and to synthesize contemporary literature regarding the outcomes of these two specific operative methods.

### Objectives

Objective of this study is to compare outcomes between two procedures while focusing on cause and effect association.

### Methodology

Prospective comparative study was conducted to evaluate outcomes of inguinal ligation

versus laparoscopic high ligation in patient undergone surgical treatment for varicocele at Bashir Hospital Sialkot from January, 2026 to March, 2026.

### Results

There were 30 patients who underwent varicocele surgery. Laparoscopic high ligation was performed on 15 patients, and inguinal ligation was performed on 15 patients. Recurrence was more common in patients who underwent inguinal ligation procedure. The 2 patients reported recurrence in inguinal ligation and 01 in laparoscopic high ligation. The complication of pain was present in 33.33% of 15 patients who had undergone laparoscopic high ligation and 10% who had undergone the inguinal ligation. The complication of infection was present in 3 patients, of whom 1 patient had undergone laparoscopic high ligation and 2 patients had undergone inguinal ligation.

### Discussion

The following is a rephrased synthesis of the provided research, presented in a formal, descriptive, and academic tone:

Evaluation of Non-Laparoscopic Techniques Research by Gulino et al. investigated whether the integration of laparoscopic techniques is essential for inguinal or subinguinal varicocele repairs. Their findings indicated no statistically significant difference in outcomes when comparing their data to laparoscopic series. The study reported favorable clinical results utilizing sub-inguinal surgical ligature without the aid of laparoscopic magnification or specialized instrumentation, suggesting that positive outcomes are achievable through standard surgical approaches<sup>3</sup>.

In a study assessing the treatment of painful varicoceles, Akkoç et al. concluded that retroperitoneal laparoscopic high ligation (the Palomo technique) and subinguinal varicocelectomy yielded comparable results regarding pain resolution and complication rates. Notably, the Palomo group demonstrated a significantly shorter operative dura-

tion. The authors noted that while laparoscopic subinguinal varicocelectomy remains the current standard, retroperitoneal laparoscopic high ligation serves as an efficient alternative, offering similar symptomatic relief with reduced surgical time compared to loupe-assisted methods<sup>4</sup>.

A comparative study by Sangrasi et al. determined that the open inguinal (Ivanissevich) procedure and laparoscopic varicocelectomy provide nearly equivalent postoperative improvements in semen parameters and similar complication profiles. Key distinctions were found in perioperative factors:

- Open Inguinal Procedure: Noted for shorter operating times and cost effectiveness in settings where specialized equipment is limited.
- Laparoscopic Varicocelectomy: Offered the advantages of reduced analgesic requirements and shorter hospital stays.

The study concluded that loupe-magnified open inguinal varicocelectomy remains a highly effective intervention, particularly when laparoscopic resources or costs are prohibitive<sup>5</sup>.

Orhan et al. examined the nuances between two laparoscopic approaches, noting that neither method resulted in postoperative hydrocele. However, minor differences in recurrence were observed, with one relapse in the retroperitoneal laparoscopic high inguinal varicocelectomy (laparoscopic high inguinal varicocelectomy) group compared to two in the MSIV group. While both techniques are effective, the study highlighted that the complex venous anatomy inherent to the subinguinal approach; Laparoscopic high inguinal varicocelectomy (laparoscopic high inguinal varicocelectomy) increases technical difficulty and the potential for relapse, suggesting that the high inguinal approach may offer a more streamlined surgical experience<sup>6</sup>.

#### **Conclusion:**

This concludes that retroperitoneal laparoscopic high ligation is better option than inguinal ligation.

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#### **Limitations**

A large sample size is required to give more accurate conclusion.

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