SJMS

Volume-4, Issue 3
March'26

SIAL JOURNAL OF MEDICAL SCIENCES

ISSN (Print): 2959-6920, ISSN (online): 2959-6939

Overall Issue 15

SJMS available on OJS (online Journal System) with Separate DOI No. for each article
http://www.sialjournal.com

Journal indexed with PakMediNet (**https://www.pakmedinet.com/sjms**) Crossref doi

Publisher: Sialkot Medical College, 06-KM Daska Road, Sialkot

SJMS
Sial Journal of Medical Sciences
ISSN (Print): 2959-6920, ISSN (online): 2959-6939

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بسم اللہ الرحمٰن الرحیم
الحمد للہ وحدہ،و الصلوۃ والسلام علیٰ من لا نبیا بعدہ

FROM THE DESK OF EDITOR IN CHIEF

With the Grace of Almighty Allah, the 4thvolume, Issue-3 and overall 15th 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)/ **Crossref DOI**

This is March-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. SahibzadaMasood Us Syed
(Certified Medical Editor,
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SIAL JOURNAL OF MEDICAL SCIENCES

GUIDELINES FOR AUTHORS

INFORMATION FOR CONTRIBUTORS

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.

1. The material is **original**
2. The study **methods** are appropriate
3. **Data** are sound
4. The **discussion** should contain international reference regarding results
5. The **conclusions** are reasonable and supported by the data.
6. The article is written in reasonably **good English**, Manuscripts which do not follow the guidelines are likely to be sent back to authors without initiating the peer review process. All accepted manuscripts are subject to editorial modifications to suit the language and style of Sial Journal of Medical Sciences. Manuscripts once accepted will be edited and returned to author for approval. If desired, the editor may be asked to share the data which will be kept confidential. The journal shall be published **quarterly** and official language of Sial Journal of Medical Sciences is **English**, Concise US English dictionary is used as a reference for spellings and hyphenation. The journal shall be distributed to all medical colleges, libraries and related institutes.

Manuscripts for publication are accepted from authors both within the country and from abroad. These should be prepared in accordance with the fifth edition of Uniform Requirements for Manuscripts Submitted to Biomedical Journals established by **Vancouver** group (**International Committee of Medical Journal Editors, ICMJE**) originally published in **New England Journal of Medicine 1997, 336 309-15**. The complete document, updated December, 2010 appears at **http:/www.icmje.org/index.html** and should not have been offered for publication elsewhere or published previously. If so, permission for re publication must be enclosed from the editors/copy holders. Authors should disclose at the time of submission, information on financial conflicts of interest that may influence the manuscript.

All accepted manuscripts should be accompanied by a signed undertaking statement of authorship by all authors regarding their qualification, designation, affiliation, contribution and responsibility. Financial disclosure and acknowledgement, as per standard format at the end of the instruction to the author should be declared. The statement with original signatures is to be sent. Scanned copy of manuscript should be submitted by the corresponding authors by email, which should indicate the address, phone number, fax number, and e-mail address for correspondence in the title page of manuscripts.

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Editorial and Review Board of Sial Journal of Medical Sciences shall review all the received materials. The manuscripts are sent to three most relevant investigators for review of the contents including statistical analysis. The editor selects peer referees from the specialist database owned by the Editorial and Review Board. For review, names and their affiliations of the authors are blinded.

Acceptance of the manuscript is decided, based on the critiques and recommended decision of the referees. A referee's decision is made as;

1. **Acceptance without revision**
2. **Acceptance after minor changes**
3. **Acceptance after major changes**
4. **Rejection**

If there is marked discrepancy in the decisions between the three referees or in opinions between the author and referees(s), the Editor may send the manuscript to another referee for additional comments and recommended decision Names and decisions of the referees are masked. A final decision on acceptance or rejection for publication shall be forwarded to the corresponding author from the Editorial Office. The usual reasons of rejection are insufficient originality, serious scientific flaws and poor quality of illustrations. Rarity itself of a disease is not an acceptable condition of case reports. The **peer review** process takes usually about **03 months** after the manuscript submission. Revisions are usually requested to take account of criticism and comments made by referees. Failure to resubmit the revised manuscript within 02 months is regarded as a withdrawal. The corresponding author must indicate clearly what alterations have been made in response to the referee's comments point by point. Acceptable reasons should be given for noncompliance with any recommendation of the referees: **Once accepted, original articles will be published in next quarter within 03 to 06 months.**

Electronical Submission: The manuscript may be submitted electronically via this e-mail: **sahibzadadrsyed786@gmail.com/deanresearch@smcs.edu.pk/chiefeditor@sialjournal.com**. The electronically submitted images should be of high resolution (300 dpi). Acceptable file type is Word for Windows 10 and later versions.

Statistics: Author should describe statistical methods with enough detail to enable a knowledgeable reader with access to the original data to verify the reported results. When possible, quantify findings and present them with appropriate indicators of measurement error or uncertainty. Provide actual **P values**, rather than stating as just < 0.05 or > 0.05 etc. In statistical analysis of data, **95% confidence intervals** must be employed. References for the design of the study and statistical methods should be to standard works when possible (with pages stated) rather than to papers in which the designs or methods were originally reported. Specify any general use **computer programs** used. Define statistical terms abbreviations, and most symbols. **All measurements must be in SI units except blood pressure (mm Hg) and drugs (metric units). Generic names of drugs must be used.** Use terms from the medical subject headings (MeSH). **Uncommon abbreviations should be avoided** and should be preceded by the full word before their next appearance in the text. Abbreviations for some of the commoner units are Gram (gm); Kilogram (kg) Milligram (mg): Microgram (ug), Nanogram (ng); Picogram (pg): Hour (hr); Second (sec): Cubic Millimeter (mm): Millimeter (mm): Centimeter (cm); Milliliter (mil); Pound (lb); Milliequivalent (mEq); Micron (u) and Percent (%) Plural words have the same abbreviation.

Tables should be typed in double line spacing without ruled lines and should include essential data. Avoid crowding. Main heading should be in capital letters. Below this a caption in small letters must be included.

Illustrations and figures should preferably be professionally drawn. These should be given capital letters and numbers e.g. figure-2 and table-4. Tables and figures must bear a number corresponding to a similar number in the text.

Except for especially complicated drawings, which show large amounts of data, all figures are published at one single page width, the smallest parts of the figure must be legible. All the legends for figures should be typewritten in double space. Do not use a separate sheet for each legend. Figure legend should describe briefly the data shown, explain any abbreviations or reference point in the photographs, and identify all units, mathematical expressions abscissas, ordinates and symbols.

Color photographs will be published if the Editor decide them absolute necessary. The entire expense of reproducing colour photographs will be charged to the author. The author is responsible for submitting prints that are of sufficient quality to permit accurate reproduction. and of approving the final color galley proof. All photographs should be correctly exposed and sharply focused.

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The Sial Journal of Medical Sciences is a scientific and **peer reviewed journal** that is uniquely focused on **medical health** of a common man. The Journal emphasizes on interdisciplinary research. This journal provides a platform for authors, both at the national and international levels. It provides insight into the greater understanding of societies. It encourages to study of broader aspects of research. The journal reflects the perspectives of a broad range of disciplines. It caters up to date information on all the disciplines relevant including health and international relations. The Sial Journal of Medical Sciences welcomes local as well as international original research articles, review articles, and case reports.

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Once the article is submitted, the author grants the editorial board full publishing rights & it is the absolute right of the editorial board to decide on article withdrawals.

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SIAL JOURNAL OF MEDICAL SCIENCES
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(PEER REVIEW) FOR COMMENTS

Part-A

Reviewer's & Author's Feedback		Reviewer's comment Artificial Intelligence (AI) generated or assisted review comments are strictly prohibited during peer review.
Significance of Manuscript	Please write a few sentences regarding the importance of this manuscript for the scientific community. A minimum of 3-4 sentences may be required for this part. Is the manuscript scientifically, correct? Please write here.	
Topic	Is the title of the article suitable? (If not please suggest an alternative title)	
Abstract	Is the abstract of the article is structured and comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here.	
Introduction	Is the Introduction relevant?	
Methodology	Whether the methodology used is according to the study?	
Results	Please check the results?	
Discussion	Whether all variables present in results are discussed here and compared with international and national studies.	
References	Are the references sufficient in accordance with the Vancouver style and recent? Only 20% references of 05 year older are admissible. If you have suggestions of additional references, please mention them in the review form.	
Language	Is the language/English quality of the article suitable for scholarly communications?	
Optional	General Additional comments	

Part-B

Ethical Issues	**Are there ethical issues in this manuscript? Alongwith permission of Ethics Committee** ***(If yes, Kindly please write down the ethical issues here in detail)and if not then attach Ethics Committee letter***	
Conflict of Interest	**Are there competing interest issues in this manuscript?**	
IRB	**Letter of Institutional Review Board**	
Similarity/ plagiarism	**(percentage)**	

Part-C

	Guideline	**MARKS of this manuscript**
Decision	Give OVERALL MARKS you want to give to this manuscript (Highest: 10 Lowest: 0) **Guideline:** 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	

Part-D

Editorial Comments (This section is reserved for the comments from journal editorial office and editors):

		Author's Feedback
Feedback		

Part-E

Certificate	**Reviewer Details:** **This section is mandatory to prepare the Reviewer Certificate.** **Please complete this section carefully. Reviewer Certificate will be generated by using this information only.** **Your Certificate will be wrong, if you provide incorrect information.** **Please note modification of certificate will not be possible after generation.** **Certificate will not be issued if incomplete information is provided.**
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I declare that I have no competing interest as a reviewer and I take the responsibility of Review.

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The journal requires a certificate from the respective Institutional review board and Ethics committee for the research encompassed in the submitted manuscript All clinical investigations must be conducted according to the declaration of Helsinki principles.

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AS REQUIRED BY THE UNIVERSITY OF HEALTH SCIENCES, LAHORE-PUNJAB-PAKISTAN

Title of the Project					
Name of Researcher					
Discipline	Ph.D. ☐	M.Phil. ☐	MHPE ☐	M.S (Nursing) ☐	Research Project ☐
Specialty					

Sr. #	**Please answer each question by ticking the appropriate box**	**Yes**	**No**	**N/A**
1.	Have you, before filling in this form, read a relevant research ethics guideline of animal, human or biological material research?			
2.	Is the project multidisciplinary with involvement of different departments/ institutes?			
3.	Does the PI/Co-PIs of the project (early stage/experienced) have appropriate scientific skills and experience for execution of the project under consideration?			
4.	Does the study involve participants who are particularly vulnerable? (e.g. refugees, prisoners, victims of violence, patients with sensitive medical conditions e.g. HIV/AIDS, drug addiction) or are unable to give informed consent (e.g. children, people with learning disabilities)?			
5.	Does the study involve archival material collected during research/routine laboratory testing and the material cannot be traced to its origin or cannot be accessed?			
6.	If the answer to the items 2,4,5 is yes, then have you taken formal approval from the collaborating institutes/organizations/centers?			
7.	Will the study involve discussion of sensitive topics (e.g. sexual activity, drug use) or induce embarrassment, psychological stress or anxiety or cause harm or negative consequences?			
8.	Is there any potential conflict of interest relating to the study? If yes then have you declared the nature of conflict in the prescribed proforma?(This declaration may be made a part of any existing proforma)			
9.	Will financial inducements (other than reasonable expenses and compensation for time) be offered to participants?			
10.	Will drugs, placebos, or other substances (e.g. food or drink constituents, dietary supplements) be administered to the study participants?			
11.	If answer to 10 is yes, then is the proposed research registered with Drug Regulatory Authority of Pakistan according to DRAP Act 2012? (Guidelines available online at http://www.dra.gov.pk/userfiles1/file/ProcedureforClinicalTrialApplications.pdf)			
12.	Does this study involve handling, transportation and storage of Infectious agents, toxins, or chemicals (pathogenic to humans, animals or plants)?			
13.	If answer to 12 is yes, then are the standard biosafety measures (contamination control, spill response, waste management, use of protective apparel, and inventory control) ensured for the execution of this project?			
14.	Is the project in compliance with *Export Control Act, 2004? (Link for Export Control Act, 2004: https://secdiv.gov.pk/uploads/Doc-			

Page **1** of **2**

	1%20Export%20Control%20Act-2004-0c0c.pdf)			
15.	If the study involves distribution of questionnaires to the participants, has the right to Response Omission and Anonymity been provided to them?			
16.	In case of animal studies, have you considered alternatives (*in vitro* systems, computer simulations and/or mathematical models) to reduce or replace the use of animals as far as possible?			
17.	Will you make sure that the health of humans/animals be given prior consideration and avoid or minimize discomfort, distress, and all procedures will be kept aseptic, painless and minimally intrusive?			
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19.	Will you ensure confidentiality and data protection related to study participants?			
20.	Will you share study findings with the participants and ERC when asked?			
21.	Will you make sure that the results are only used for research purpose and information disseminated only through research publication / conference papers/presentations?			
22.	Have you attached the consent form with explicit right of the participants to withdraw from study at their will?			

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1. *Duly filled and signed Proforma should be submitted to the Registration Department, along with the research synopsis recommended by the concerned Synopsis Review Committee, decision letter of the Synopsis Review Committee and Correction certificate for incorporation of changes suggested by the committee.*
2. *In case of collaboration in research with an extrinsic institution, an approval letter from the Head of collaborating institution should be attached.*
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Declaration:

I/We declare that all the information given in this proforma is correct and I/We will abide by the ethical guidelines relevant to this research. I/ We will reapply for ethical approval if there is a significant change or revision in the design or protocol of the proposed study.

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Cell #	Designation:	Designation:	Department:
	Department:	Department:	
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To,

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The Ethics Committee/ Institutional Board of ……. (Name of Institution/ College/ University) reviewed and examined the topic and found no issue regarding aethics and the Institutional review board found fit for publishing of the following topic: _____

_____

_____"

and granted approval for conduction of further research on the above said topic.

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Name of Institution/ College/ University

DISCLAIMER: None
CONFLICT OF INTEREST: None
SOURCE OF FUNDING: None

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1. Invited review articles describe concise review an important subjects of health issues. The **review articles** are accepted after editorial evaluation.
2. **Original Articles:** should normally include a title, abstract, introduction, materials & methodology, results, discussion and conclusions, acknowledgements and references

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   Abstract: (separate page) It should comprise of not more than **150 words** and should include what was done, the main findings and their implications. Details should be avoided. It should be structured (i.e. Objectives, methodology, results and conclusion)

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   Methodology (Materials and Methods): It should describe the criteria for selection of material and identify clearly the methods and apparatus used. Avoid using names of patients or other clues that can lead to disclosure of their identity We endorse the principles embodies in the Declaration of Helsinki and expect that all investigations involving human materials have been performed in accordance with these principles. For animal experiment "the Guiding Principles in the Care and Use of Animals approved by the American Physiological Society have to be observed.

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   Discussion and Conclusions: These comments on the results of the study, its limitations and how the study compares with other similar or relevant studies. Recommendations for further study may be recorded when indicated. **Discussion ordinarily should not be more than one third of the total length of the manuscript.** This section should include, in the order specified: (1) a summary of the major findings, (i) their relationship to other similar studies, (i) strength and limitations of methods. Avoid unqualified statements and conclusions which are not completely supported by the data.

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   Financial and material support: It should also be acknowledged Groups of persons who have contributed materially to the paper but whose **contributions** do not justly

authorship may be listed under a heading such as **"clinical investigators"** or **"participating investigators,** and their function or contribution should be described for example, served as **scientific advisers**," **"critically reviewed the study proposal**," "**collected data**," or "**provided and cared for study patients**. A **written consent** is required from all the persons acknowledged, indicating their acceptance for the same.

References: These must be numbered in the order according to which they appear in the text and should include all information **(Vancouver style).** Abstracts and personal communications may be cited in text but should not be included in the references Authors are responsible for the accuracy of all references. These cannot be checked by the editors

3. **Case Reports:** In case reports, case history or case description replace the Materials and Methods section as well as Results section.
4. **Drug review articles**. We urge the authors to register their clinical trials involving human subjects with appropriate Clinical Trials Authority of country of region: Sial Journal of Medical Sciences publishes state of the art reviews on drugs/agents meant for therapeutic or prophylactic use is expected that the authors have sufficient credible experience in the related field subject to condition that the

a. Drug should be recently developed and should be available commercially for use in human subjects.
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5. **Special feature articles** as and when but shat follow the pattern of original or review articles.
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   The manuscript should consist of an abstract **(250-300 words),** introduction, aims & subjects, text should consist of **(3000-4000 words)** and **references (limited to 50).** The number of figures and tables should be limited to maximum of 5.

   Abstract should be structured as objectives methods, results and conclusion. Text should be arranged in headings of Introduction, aims and objectives, and recommendations
7. **Short Reports:** These must not exceed **1000 words**, including an abstract of no more than 50 words, 1 or 2 tables or illustrations and **5-6 references.**
8. **Annotation/Editorial:** Suggestions for topics and for authors are welcome. Usually these are written by the editors
9. **Letter to Editor:** Should not contain more than 300 words with few references and should be signed by all the authors Readers are invited to freely contribute to this column as regard their experience, important pediatric research etc.
10. **Book reviews:** Are also welcome from readers.
11. **Notes && Notices**: News, forthcoming events, conferences and other academic and literary pursuits etc. are included.

Authors are requested to suggest (02 National and 01 International Reviewer) in given format

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Degrees			
Designation			
Affiliation			
Subject Specialty			
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SIAL JOURNAL OF MEDICAL SCIENCES

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This is to confirm that the manuscript titled_____

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Submitted for publication in Quarterly **"SIAL JOURNAL OF MEDICAL SCIENCES"** has been read and approved by all authors. We, the authors confirm that:

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Note; The figures should be sent in the format of JPEG or GIF to ensure good quality images

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2. Sequence of title page, abstract and keywords, introduction, materials and methods, results, discussion, acknowledgments, reference, tables and figure legends. All **pages** should be **numbered** consecutively starting from the title page.
3. Title page with article title, author's full name(s) and **affiliation, address** for correspondence (including telephone, fax number and e-mail address) running title (less than 10 words) and footnotes if any.
4. **Check the total percentages in the table carefully**
5. **Abstract** in structured format for original article and in unstructured format for case report up to 150 words, and key words as in MeSH
6. All **tables and figures** numbers found in the text Reference listed in proper format Check that all **references** are listed in the references section and cited in the text and vice versa.
7. It is certified that the article is not verified by the **plagiarism** test, if so please send the result
8. Please state **conflicts of interest** of all listed authors.
9. A **covering letter**
10. An **undertaking** signed by all the authors stating that the material is not published previously, and has not been submitted for publication elsewhere as mentioned on previous page (page No. 08).

EDITORIAL;

WHO GLOBAL STRATEGY FOR FOOD SAFETY 2022-2030

Asma Bokhari[1], Masood Us Syed[2]

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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.; WHO Global strategy for food safety 2022-2030; SIAL J Med. Sci. March-2026 V-4 (Issue-3, Overall Issue-15):16-19*
Submission completed: Jan, 2026
Review began: Feb, 2026
Review ended: Feb, 2026
Accepted: Feb, 2026
Published: March, 2026

The mission of World Health Organization (WHO) Global Strategy for Food Safety 2022-2030 is to make sure that everyone, in the world, takes safe and healthy diet so as to decrease the weight of foodborne illnesses. The strategy was passed in the 75th World Health Assembly, with 05 priorities like to build evidence-based, forward-looking, cost-effective and people-centred food safety systems with coordination and enough infrastructures.[1]

For the 2023 awards, Alberto March successfully won the TITAN Gold award of the competition. He explained this amazing piece of work which brought upon the WHO with this admirable success.[2]

The WHO has formed the strategy for safety and security of the Food with expert opinion by the Technical Advisory Group (TAG) with theme of safer foods for the better health.[1]

Availability of sufficient safe food is a fundamental right and need for health of the people throughout the world. It is difficult task to provide safe and secure food to the people of the world and usually there are less-appreciated challenges/ tasks, for states, countries and their organizations and people alike.[3]

The risks associated with the consumption of unsafe food are considerable, yet challenging to measure quantitatively. The diarrheal diseases, encompassing both foodborne and waterborne variants, claim an estimated two million lives annually, with a disproportionate number of these occurring among children in underdeveloped nations. Toxins present in food, including pathogenic parasites, bacteria, viruses, prions, chemical, and radioactive substances, are responsible for more than 200 distinct diseases - spanning from infectious diseases to cancers.[3]

A projected 600 million people, 10% of the world become sick with more than two hundred diseases brought on by contaminated food annually, according to the WHO, Four Hundred Twenty Thousand (420,000) premature deaths and 33 million disable persons are due to these illnesses each year. The consequences of eating contaminated food disproportionately impact vulnerable groups, including people in extreme of their age, from few months to more than 80 years, having less resistance against diseases and those living in low- and middle-income nations.

In a number of areas, including enforcement, surveillance, regulatory infrastructure, inspection, capability and laboratory capacity, emergency response, coordination mechanisms and food safety education and training, require major improvements and member nations are struggling. A "One Health" strategy may be used for food safety initiatives, in accordance with member states, which also mentioned the necessity of incorporating food safety in their policies on trade, agriculture, the environment, health, and development.

According to World Health Organization, if proactive measures are not taken, antimicrobial resistance (AMR) will cost $100 trillion and 10 million lives by 2050. This underscores the urgency of addressing antimicrobial-resistant pathogens in the food system. In addition to reducing the public health emergency that is antimicrobial resistance (AMR), a "One Health" policy can help achieve Sustainable Development Goals of the UN, which include food safety.[4]

Maintaining the security and safety of Pakistan's food supply is a difficult task that necessitates both strong policy responses and ongoing assessment. This policy document presents a thorough plan to tackle the issues and improve food safety throughout Pakistan's Punjab province. This study considers a variety of factors in this regard, including stakeholder roles, technological advancements, international cooperation, and regulatory frameworks. The dynamic nature of food safety risks is also examined, emphasizing the need for proactive and flexible policies to combat emerging threats. The entire field of food safety is defined by a complex network of interconnected elements, ranging from farming and food processing practices to elements influencing food distribution and consumption. Every step of this spectrum requires regulatory frameworks to reduce risks.[5]

The world's largest contributor to the burden of foodborne illnesses is Central Africa. The issue is linked to the inadequate food safety regulations in numerous African nations. The national food control system in Africa is depended on disjointed laws that give various jurisdictions, which leads to shortcomings in the inspection, enforcement, and coordination of food safety regulations that are required for various industries, including trade, agriculture, and health. The incapacity to understand and contextualize the FAO and the WHO guidelines for bolstering their country programs was thought to be the cause of the lax food safety laws. Increasing the regional food safety actors' understanding of connections levels of authority which can help them for better understanding the FAO and WHO recommendations and guide changes to the continent's food safety policies.[6]

Emerging issues that are anticipated to affect food safety in the area over the next five to ten years Codex members in the area prioritized the following issues.[7]

- Insufficient assistance to oversee food regulatory systems (22%);
- Climate change (13%);
- Innovative food technologies (9%);
- Non-communicable diseases (NCDs) (9%);
- Limited support mechanisms for the National Codex Committee (NCC) (9%);
- Risk communication (9%);
- Increased transmission of foodborne diseases (9%);
- Pesticide residues on food crops (MRLs) (9%).The WHO Nutrition and Food Safety Department managed a meeting in Geneva, Switzerland.

In order to implement of the WHO Global Strategy 2022–2030, especially in the food-borne disease surveillance, this meeting, which was coordinated and arranged in partnership of offices for Disease Control and Prevention (CDC) of the USA, brought together WHO coordinating offices and other institutions.[8]

WHO GLOBAL STRATEGY FOR FOOD SAFETY 2022-2030

Food safety is a shared responsibility among producers, consumers, and governments. From farm to table, everyone has a responsibility to guarantee the safety and health of the food we eat. Through World Food Safety Day, WHO aims to lower the global burden of foodborne illnesses and mainstream food safety into the public agenda. It is everyone's concern to ensure food safety.[9]
The specific Sustainable Development Goals (SDGs) of the UN will be supported by the strategic actions and results.[10]:

Goal No 1: No poverty
Goal No 2: No hunger
Goal No 3: Healthy life
Goal No 6: Clean Drinking water and proper sanitation
Goal No 8: Country's GDP enhancement
Goal No 12: Safe and secure food usage and modern farming techniques
Goal No 13: Addressing Climate Change
Goal No 17: Contribution of all member states/ countries.

Disclaimer: None
Conflict of Interest: None
Source of Funding: None

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ORIGINAL ARTICLE

Ultrasonographic Evaluation and Causes of Hydronephrosis Multi-Center Study Bashir Health Services, Aslam Medical Complex, Private Clinic

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Submission completed: Jan, 2026
Review began: Feb, 2026
Review ended: Feb, 2026
Accepted: Feb, 2026
Published: March, 2026

Author contribution:
SH; Conceptualization of project, data collection, literature search, writing manuscript, statistical analysis, drafting, revision and final approval. AH; writing manuscript, statistical analysis, drafting, revision.

ABSTRACT

Objectives: The primary aim of this study is to assess and classify hydro-nephrosis in adults using ultrasound imaging and seeks to determine the its main causes.

Methodology: A descriptive cross-sectional study design was utilized for this research. In this approach, existing medical records and ultrasound reports of adult patients previously diagnosed with hydronephrosis were reviewed to evaluate the frequency and etiology of hydronephrosis.

The study was conducted at the Department of Radiology, of three hospitals in Sialkot, Pakistan. The study was conducted over a 6-month period from 1st July 2024 to 31st December 2024. A nonprobability purposive sampling technique was used to select relevant patient records. A total of 83 patients met the inclusion criteria.

Result: Age group of 25-50 years showed 81.9% patients presented with hydronephrosis with 47 males and 36 females. Pain being the most common symptoms was (32%). Right sided hydronephrosis was seen most commonly. Hydro ureter status was seen in 55% of patients who never had a stone. Mild hydronephrosis was the most common sign. Causes of hydronephrosis were ureteric and renal stones 29% and 23% respectively followed by pregnancy 12% and BPH 11%.

Conclusion: Overall, these findings reinforces the clinical utility of ultrasound in the prompt detection and management of hydronephrosis.

Keywords: hydronephrosis, ureteric stones, renal stones, neurogenic, stricture, structure, Ultrasonography etc.

Cite this Article as: *Shah H. & Hannan A.; Ultrasonographic Evaluation and Causes of Hydronephrosis Multi-Center Study Bashir Health Services, Aslam Medical Complex, Private Clinic. SIAL J Med. Sci. March-2026 V-4 (Issue-03, Overall Issue-15):20-24*

Introduction

Hydronephrosis is a condition characterized by the swelling of the kidney's collecting system due to obstruction in the flow of urine. This obstruction can arise from the various causes, including congenital blocka-ges, scarring from previous injuries or surgeries, tumors, urinary tract infections (UTIs), benign prostatic hyperplasia (BPH), and pregnancy. If left untreated, hydrone-phrosis can lead to severe complications, including acute and chronic renal failure[1].

Previous studies have identified calculi as the most common cause of hydronephrosis in adults, followed by tumors in the kidney, ureter, and bladder. Other less common causes include inflammatory ureteral strict-ures and neurogenic bladder issues. The presentation of hydronephrosis varies bet-ween adults and children, with anatomical abnormalities being more prevalent in the

pediatric cases. In pregnant women, hydronephrosis is often a physiological finding due to hormonal changes and mechanical compression of the ureters[1]. Despite the established causes and symptoms, there remains a need for comprehensive studies that assess the prevalence and classify-cation of hydronephrosis using modern imaging techniques.

While existing literature has explored various causes and presentations of hydronephrosis, there is a lack of focused research that systematically evaluates the condition using ultrasound in a diverse adult population. Many studies do not adequately classify the severity of hydronephrosis or identify the underlying causes in a comprehensive manner. Additionally, the impact of metabolic disorders, such as diabetes and gout, on the incidence of hydronephrosis has not been thoroughly investigated. This gap highlights the need for a study that not only assesses the prevalence of hydro-nephrosis but also classifies its severity and identifies main causes in a clinical setting.

This study is significant as it aims to provide a detailed evaluation of the hydronephrosis using ultrasound, which is a non-invasive and widely accessible imaging modality. By classifying the severity of hydronephrosis & identifying its primary causes, the research can contribute to better diagnostic and treatment strategies. Understanding the relationship between hydronephrosis and underlying conditions, such as metabolic disorders, can enhance patient manage-ment and potentially reduce the risk of severe complications. Furthermore, the findings may inform clinical practices and guidelines for the early detection and intervention of hydronephrosis.

Objectives

The primary aim of this study is to assess and classify hydronephrosis in adults using ultrasound imaging. Additionally, research seeks to determine the main causes of hydronephrosis within the study population. By analyzing demographic data and clinical history, the study will provide insights into the frequency and severity of hydroneph-rosis, ultimately contributing to improved patient care and outcomes in renal health.

Methodology

A descriptive cross-sectional study design was utilized for this research.

In this approach, existing medical records and ultrasound reports of adult patients previously diagnosed with hydronephrosis were reviewed to evaluate the prevalence and leading causes of hydronephrosis within a defined past time frame.

The study was conducted at the Department of Radiology, Bashir Health Services/ Aslam Medical Hospital and Private Clinic, Sialkot, Pakistan.

The study was conducted over a 6-month period from 1st July 2024 to 31st December 2024.

A non-probability purposive sampling technique was used to select the relevant patient records. A total of 83 patients met to the inclusion criteria as follow:

- Patients aged between 25 to 80 years,
- referred for lumbosacral spine MRI,
- primarily presented with low back pain were included

However following patients were excluded;

- Patients under 25 or over 80 years,
- Not referred for lumbosacral spine MRI,
- Absence of low back pain

Data analysis was performed using SPSS version 22. Descriptive statistics were used to define variables.

Results

We observed that 81.9% patients were in tha age group of 25-50 years. 47 males and 36 females were examined.

Category	N	%
<25	10	12.0
25–50	68	81.9
51–70	3	3.6
>70	2	2.4

Table 1. Age distribution of patients (n = 83)

Category	N	%
No history	42	50.6
History of Gout	8	9.6
History of Diabetes mellitus	22	26.5

Table 2. Chronic medical conditions in patients with hydronephrosis (n = 83)

Category	n	%
Flank pain	27	32.5
Urinary tract infection (UTI)	24	28.9
Hematuria	18	21.7
Urinary retention	14	16.9

Table 3. Presenting renal problems (n = 83)

Category	n	%	Cumulative %
Left-sided HN	27	32.5	32.5
Right-sided HN	44	53.0	85.5
Bilateral HN	12	14.5	100.0

Table 4. Laterality of hydronephrosis (n = 83)

Category	n	%	Cumulative %
Mild HN	46	55.4	55.4
Moderate HN	25	30.1	85.5
Severe HN	12	14.5	100.0

Table 5. Severity of hydronephrosis (n = 83)

Figure (1): According to presence of hydroureter

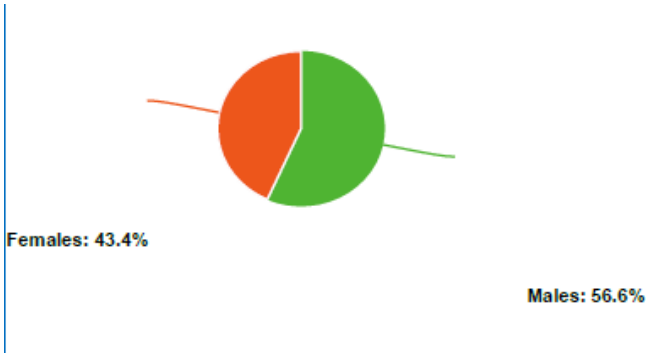

Figure (2): The gender distribution of study population is shown (44% females and 56% males).

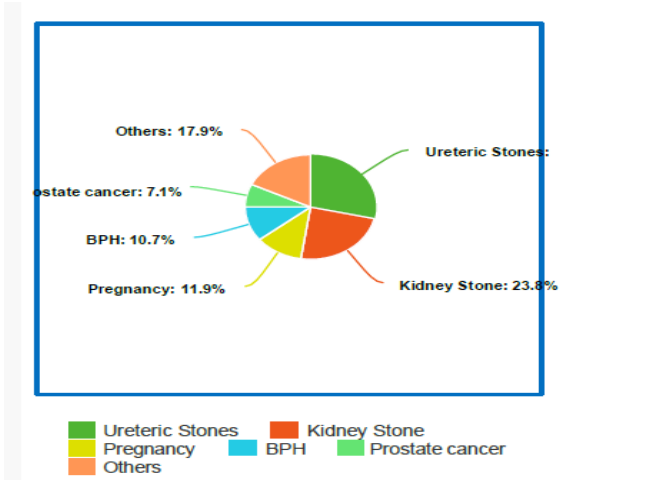

Figure 3: Subject Description according to causes of hydronephrosis

Discussion

This study aimed to examine the severity, frequency, and the leading causes of the

hydronephrosis in the adults, and to integrate the findings. Across all datasets, mild hydronephrosis emerged as the most frequently observed grade, ranging from 53% to 56% of cases, followed by moderate (25–30%) and severe (12%). These results are consistent with the previous studies conducted[2].

Researchers also reported a predominance of mild to moderate presentations, suggesting that early detection through ultrasound screening is increasingly common in clinical practice. [2]

Gender distribution patterns also indicated a higher prevalence among females due to pregnancy related physiological changes and a generally lower threshold for renal effects in the women. The current data also supported the assertion by Rasmussen and Nielsen that right sided hydronephrosis is more common in the pregnant women, likely due to the progesterone induced ureteral relaxation. [3]

In terms of etiology, ureteric stones 29% and kidney stones 23% consistently ranked as the most common causes.[4] Pregnancy (12%), and the benign prostatic hyperplasia (11%) were the second and the third most common gender-specific causes in females and males, respectively. These findings corroborate the conclusions of a study that urinary stones are the primary etiology in approximately 60% of hydronephrosis cases with detection rates increasing from grade one to grade three.[4]

Symptomatically, flank pain was the most prevalent presenting complaint i.e. 32%, followed by hematuria, urinary tract infection and urinary retention. This symptom pattern reflects the pathophysiology of obstructive uropathy, in which acute or partial obstructions produce pain, whereas chronic obstructions may remain asymptomatic until the advanced.[5]

These findings have the important clinical implications. First, they underscore critical role of ultrasonography as a sensitive non-invasive, and widely available diag-nostic tool for both grading hydronephrosis and identifying underlying causes. Second, the predominance of mild hydronephrosis highlights the opportunity for early inter-vention to prevent progression to chronic kidney disease or renal failure.[5]

Conclusion

Overall, the synthesis of these findings reinforces the clinical utility of ultrasound in the prompt detection and management of hydronephrosis, emphasizes the predominance of urinary calculi as an etiological factor, and identifies target areas—such as stone prevention strategies and screening in high-risk populations—for future research.

Limitation

The included studies were cross-sectional and hospital-based, potentially limiting generalizability to the wider population.

In addition, while ultrasonography is highly sensitive, its specificity for certain causes (e.g., early neoplasms) is limited compared to CT or MRI. Finally, patient history and comorbidities may introduce confounding factors that were not fully controlled across the studies.

Budget: Nil
Disclaimer: None
Conflict of Interest: None
Source of Funding: None

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ORIGINAL ARTICLE

Hand Washing Practices in Hostelite Students; A multicenter KAP Study

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Submission completed: Nov, 2025
Review began: Dec, 2025
Review ended: Jan, 2026
Accepted: Feb, 2026
Published: March, 2026

ABSTRACT

Objectives: To assess level of awareness and the frequency of hand washing and identifying barriers and facilitations affecting hand washing behavior.

Methods: Descriptive cross-sectional study in three Medical colleges with hostel facilities in Sialkot city, including Sialkot Medical College, Islam Medical College and Khawaja Muhammad Safdar Medical College in Fourth-year MBBS students residing in hostels from July to September 2025. Stratified random sampling based on student lists from each college was used and 70 students were included.

Results: Almost 50% of students used to hand wash always before meals and also use soap for it. However 80% of students complained lack of facilities of hand washing before meals, while 41% are fully aware regarding importance of hand washing.

Conclusion: Most of the students do hand washing with soap before taking meals.

Keywords: aware, Soap, hostelite, facilitation, barriers

Cite this Article as: *Saeed S., Fatima M., Chaudhary K., Waqar M., Nasir N., Najeeb MN; Hand Washing Practices in Hostelite Students; A multicenter KAP Study. SIAL J Med. Sci. March-2026 V-4 (Issue-03, Overall Issue-15):25-28*

Author contribution:
SS, MA, KC, MW, NN, MNN: Designed the research Pattern and drafted the manuscript.

Introduction

Hand hygiene is recognized globally as a fundamental practice for preventing infectious diseases. Despite being an essential part of personal hygiene and public health, compliance with proper hand washing, especially before meals, is often neglected. In communal environments such as hostels, where medical students live and eat together, the risk of transmitting infections due to poor hand hygiene increases. This issue is particularly relevant for future healthcare providers who are expected to model appropriate hygiene practices.

Fourth-year MBBS students, due to their clinical exposure, should ideally demonstrate optimal hygiene behaviors. However, behavioral inertia, lack of monitoring, and resource-related issues often compromise these practices. This study aims to evaluate the hand washing practices before meals

among hostel-residing 4th year MBBS students in Sialkot Medical College Sialkot.
Several national and international studies reveal that knowledge alone does not ensure hand hygiene compliance. A study in Lahore indicated that only 58% of medical students regularly washed their hands before meals[1]. In Karachi, students cited time constraints, forgetfulness, and lack of water as barriers[2].
A WHO report underscores that correct hand washing with soap and water can reduce gastrointestinal illnesses by up to 40%[3]. However, localized studies from Sialkot are missing, which this research intends to address.

Objectives

To assess level of awareness and the frequency of hand washing and identifying barriers and facilitations affecting hand washing behavior.

Methodology

Descriptive cross-sectional study in three Medical colleges with hostel facilities in Sialkot city, including Sialkot Medical College, Islam Medical College and Khawaja Muhammad Safdar Medical College in Fourth-year MBBS students residing in hostels from July to September 2025.
Stratified random sampling based on student lists from each college was used and 70 students were included.
A structured questionnaire distributed to participants included;

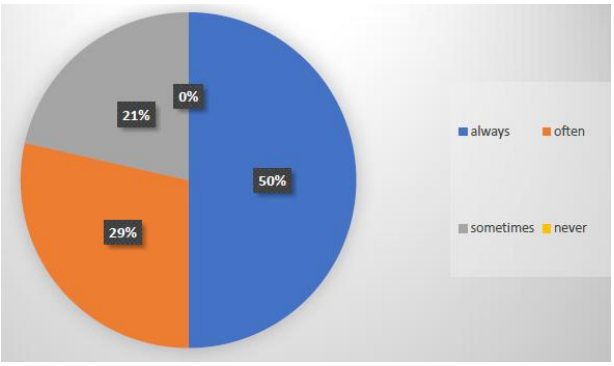
- Demography
- Frequency of hand washing before meals
- Hand washing method used (soap, sanitizer, water only)
- Awareness of hand hygiene guidelines
- Perceived barriers (lack of water, time, forgetfulness)

Results

Almost 50% of students used to hand wash always before meals and also use soap for it. However 80% of students complained lack of facilities of hand washing before meals, while 41% are fully aware regarding importance of hand washing.

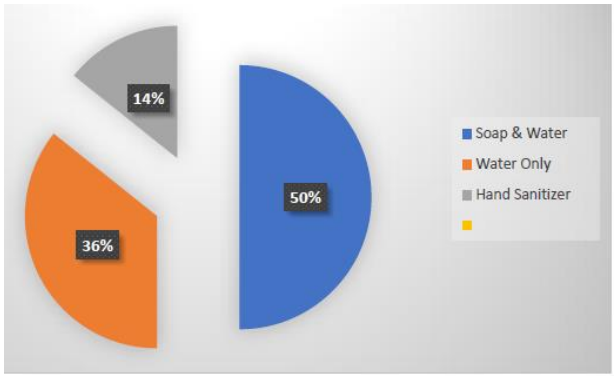
Frequency	No. of Students	Percentage
Always	**35**	**50**
Often (3–4 times/week)	**20**	**29**
Sometimes (1–2 times/week)	**15**	**21**
Never	**0**	**0**

Table 1: Frequency of Hand Washing Before Meals



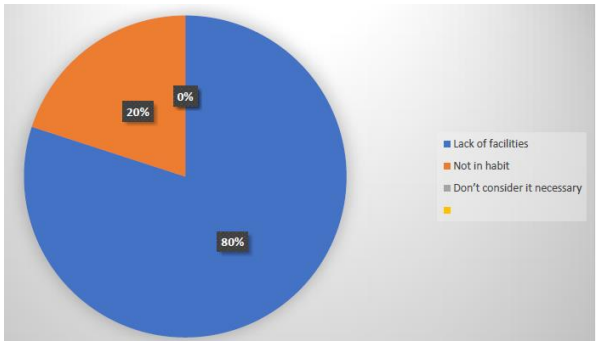
Frequency	No. of Students	Percentage
Soap and water	**35**	**50**
Water Only	**25**	**36**
Hand Sanitizer	**10**	**14**

Table 2: Hand Washing Methods Used



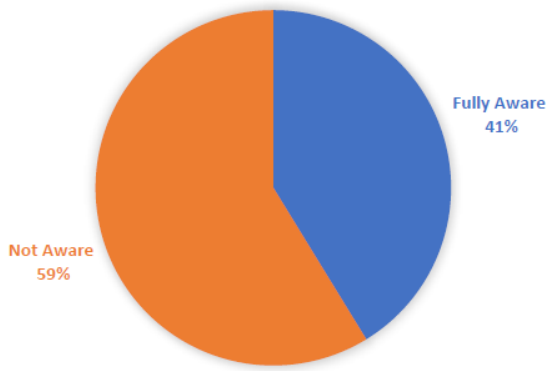
Barrier	Students Reporting	Percentage
Lack of facilities	28	80
Not in habit	7	20
Don't consider it necessary	0	0

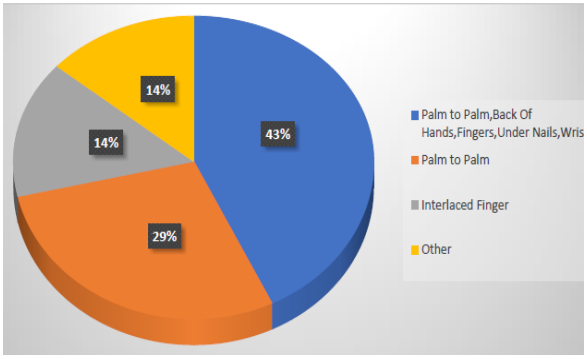
Table 3: Barriers to Regular Hand Washing



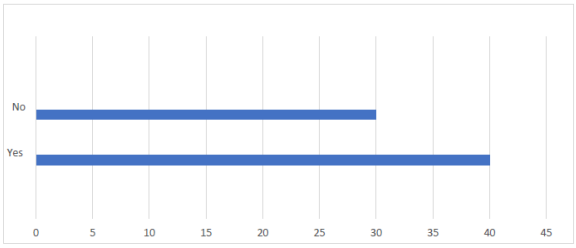
Awareness level	No. of Students	Percentage
Fully Aware	33	41
Not Aware	37	59

Table 4: Awareness of WHO Hand Hygiene Guidelines:

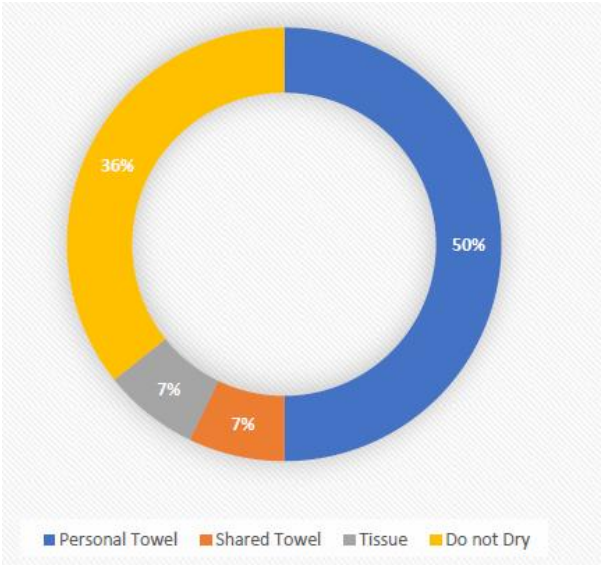




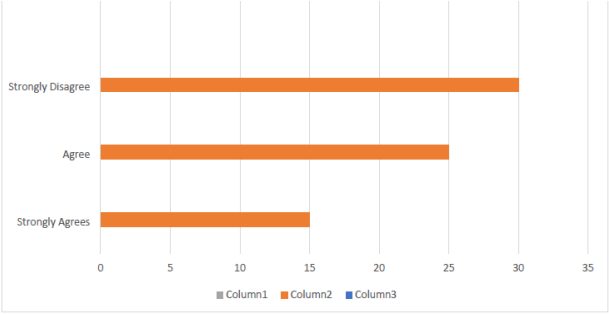
5.Steps Performed During Hand Washing:



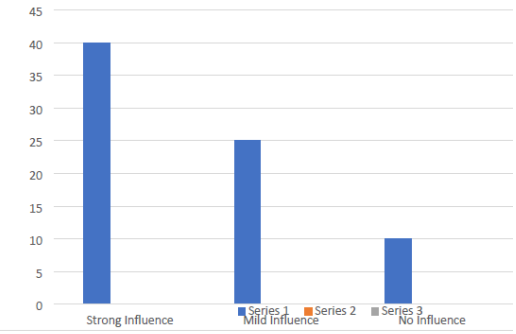
6.Follow up of Complete Hand Washing Procedure: Complete hand washing procedure for 20 seconds



7.Drying Method of Hands After Washing:



8.Hand Sanitizer as a Substitute for Hand Washing:



9. Influence of Peer Behavior on Hand Washing:

Discussion

Hand washing is very effective in preventing communicable diseases. Hand washing is particularly important for children, as they are more vulnerable to infections gained from unwashed hands and also due to their unhealthy behaviour. The study was conducted to determine the availability of hand washing facilities, hand washing knowledge and practices among public primary schools in Kintampo Municipality.[4]

There is the need for effective hand washing education in the schools to help improve hand washing knowledge and practices. Hand washing facilities in the schools were found to be inadequate.[4] We also recommended the same.

Although the results of this study indicated that respondents had high levels of knowledge, attitude and practices of hand hygiene, the information provided in this study regarding current hand hygiene knowledge, attitudes and practices among students will help identify the gaps in knowledge, poor attitudes and substandard practices. This will also be valuable to the design and implementation of the hand hygiene intervention. Hand hygiene is essential to the health of the school community. This study assessed the levels of knowledge, attitude and practices of hand hygiene among Canadian Maple Interna-tional School, Dhaka.[5] Their results are acco-rdance with our study.

Conclusion:

Most of the students do hand washing with soap before taking meals.

Ethical Considerations:

This study was adhered to ethical standards for human research. Informed consent was obtained. Data confidentiality and participant anonymity as ensured. Ethical approval was obtained from the Institutional Review Board of Sialkot Medical College.

Disclaimer: None

Conflict of Interest: None

Source of Funding: None

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ORIGINAL ARTICLE

Audit of Orthopedic Surgical Cases in Sialkot: A One-Year Review

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Submission completed: Oct, 2025
Review began: Nov, 2026
Review ended: Dec, 2026
Accepted: Jan, 2026
Published: March, 2026

Author contribution:
NAC: Designed the research Pattern and drafted the manuscript.

Abstract

Objectives: This study aimed to conduct a one-year audit of orthopedic surgical cases in Nisar Orthopaedics Hospital Commissioner Road, Sialkot to analyze patient demographics, complications and outcomes.

Methodology: A retrospective audit was performed using data representing orthopedic surgical procedures from October 2024 to September 2025.Patient Demographics, diagnosis, procedure type and outcomes such as complications, readmission and mortality..

Results: A total of 50 surgical cases were analyzed. The mean patient age was 41.7 years. The sex distribution of 29 males and 21 females. The most common procedures were Debridement & irrigation - infected wound (11 cases), Open reduction and internal fixation - Tibial shaft fracture (10 cases), Intramedullary nailing - Femoral shaft (9 cases), Total hip arthroplasty, K-wire fixation - hand/wrist. The overall complication rate was 20.0%. Thirty-day mortality was 4.0%, while readmission within 30 days occurred in 52.0% of cases. Average length of hospital stay was 9 days.

Conclusion: This audit highlights procedure distribution, complication rates, and patient outcomes of orthopedic surgeries in Sialkot. The findings highlight the predominance of trauma related surgeries, complication rates. Regular audits can guide quality improvement in orthopedic surgical care.

Keywords:

Cite this Article as: *Chaudhry N.A; Audit of Orthopedic Surgical Cases in Sialkot: A One-Year Review. SIAL J Med. Sci. March-2026 V-4 (Issue-03, Overall Issue-15):29-32*

Introduction

Orthopedic surgery plays a central role in hospital-based surgical care, particularly in countries like Pakistan where trauma from road accidents and degenerative conditions such as osteoarthritis contribute significantly to the overall disease burden[1].

Given the rising number of patients requiring the orthopedic interventions, it becomes the essential to monitor and evaluate the quality of care through systematic approaches such as surgical audits[2].

A surgical audit involves a detailed assessment of cases performed, surgical outcomes, postoperative complications, and patient recovery trends[3]. Such audits not only highlight existing gaps in practice but also provide valuable insights for improving clinical decision-making and resource allocation[4]. Previous research conducted in major cities including Lahore and Karachi has reported trends in orthopedic surgeries, examining factors like complication rates, average hospital stay, and the distribution of the common procedures[5, 6]. However, there remains a scarcity of data from smaller urban centers such as Sialkot, despite its growing healthcare needs. Addressing this gap, the present study proposes a one-year surgical audit of orthopedic cases in hospitals across Sialkot. The focus will be on analyzing patient demographics, types of procedures

performed, complication rates, and treatment outcomes, thereby offering evidence to support enhanced orthopedic care and improved patient management in the region[7].

Objectives:

This study aimed to conduct a one-year audit of orthopedic surgical cases in Nisar Orthopaedic Hospital Commissioner Road, Sialkot hospital to analyze patient demographics, complications and outcomes.

Methodology

This study employed a retrospective audit design conducted at a private hospital in Sialkot from October 2024 to September 2025. All orthopedic surgical procedures performed during the study period were included. Data were extracted from hospital records, covering patient demographics (age, sex), ASA grade, diagnosis, procedure type, anesthesia method, surgery duration, estimated blood loss, implant use, post-operative complications, outcomes, readmission within 30 days, and 30-day mortality. Data were entered and analyzed using statistical software. Descriptive statistics including frequencies, percent-ages, and means were calculated, while complication rates and outcomes were categorized and reported according to procedure type9.

Results

A total of 50 cases were analyzed. The mean age of patients was 41.7 years (range 5–86). The sex distribution was 29 males and 21 females. The five most common procedures performed were:

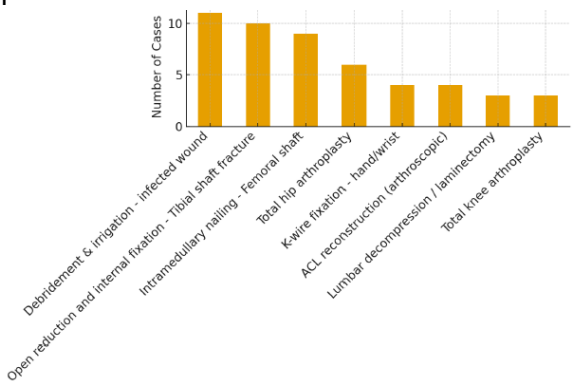

Figure 1. Procedure Distribution (08 Ortrhopaedic Procedures in Sialkot)

- Debridement & irrigation – infected wound: 11 cases
- Open reduction and internal fixation Tibial shaft fracture: 10 cases
- Intramedullary nailing – Femoral shaft: 9 cases
- Total hip arthroplasty: 6 cases
- K-wire fixation - hand/wrist: 4 cases

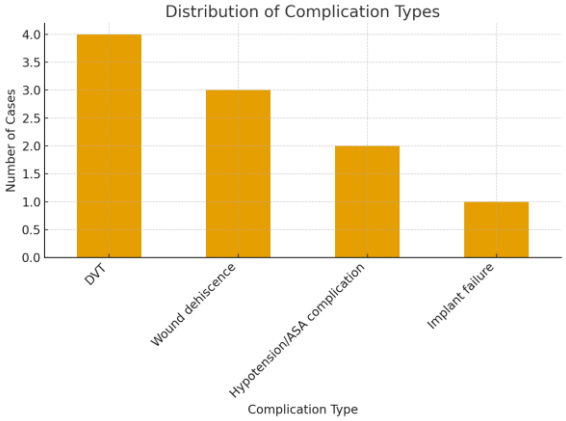

Figure 2. Complication Types Distribution

The overall complication rate was 20.0%. The most frequent complications included surgical site infection, deep vein thrombosis, and implant-related issues. The average length of stay was 9 days. Readmission within 30 days occurred in52.0% of cases, and the 30-day mortality was 4.0%.

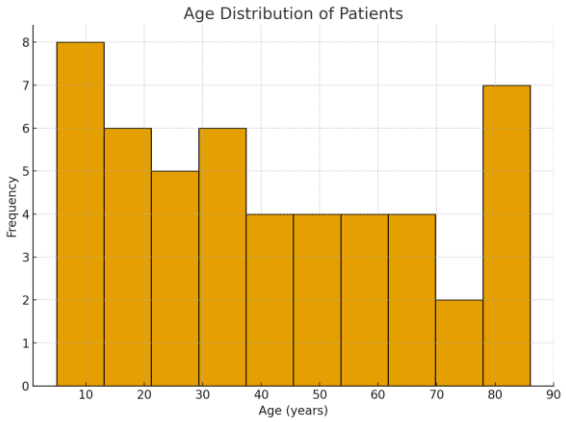

Figure 3. Age Distribution of Patients

Discussion

Surgical audit should be made a regular practice to serve as an important and effective tool of accountibilty on clinical outcomes and self-evaluation and in improving the quality of our health care system[9].

In Pakistan, there is a need for Surgical Audit in our hospital for proper planning and betterment of health care system of the country. It is recommended to start computerized audit and sharing of patient's database[10].

Change of junior doctors every 4~6 months is related to fewer re-audits. Active involvement by supervising consultant, reallocation of the project after one trainee has finished, and full support of audit department may increase the ratio of completion of audit cycles, thereby improving the patient care[11].

Royal College of Surgeons guidelines and integration with IT services significantly improved the quality and legibility of operative notes that were being documented in the trauma and orthopaedics department. Structured document standards and good integration with a computer-based IT service help prompt surgeons to document in a better and easy way, thereby leading to improved clinical documentation[12].

An orthopedic specialty specific template for writing operative notes has been proposed. Also, It has been proposed that all surgical specialty registrar level doctors should undergo training for writing operative notes and aide memoires be placed in the OT complex[13].

The importance of complete and legible operation notes is indisputable. Orthopedic operation notes at the author's institution were audited against guidelines regarding content and legibility[14].

Conclusion:

This one-year audit of orthopedic surgical cases in Sialkot hospital highlights the pred-ominance of trauma surgeries, acceptable complication rates, and relatively low mortality.

Recommendation

Regular audit should be institutionalized to monitor performance, improve patient safety, and guide quality improvement initiatives.

Disclaimer: None
Conflict of Interest: None
Source of Funding: None

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ORIGINAL ARTICLE

Frequency of Psychological Changes in Surgical Patients: A Prospective Cross-Sectional Multi-Center Study

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Abstract

Objectives: To find how often patients have psychological symptoms in surgery-related cases.

Methodology: A prospective cross-sectional study was conducted from 1st June to 10th of August 2025 across five hospitals in Sialkot. One hundred fifty post-operative patients (age ≥11 years) were enrolled consecutively. Participants completed a 20-item symptom questionnaire (0 = Never to 4 = Always). Analyses included descriptive statistics, reliability testing (Cronbach's α), exploratory factor analysis, and multiple linear regression. Results are reported as β coefficients with 95% confidence intervals (CI) and model fit (R^2).

Results: The questionnaire showed excellent reliability (Cronbach's α = 0.92). Factor analysis supported four groups of symptoms: Anxiety, Depression, Irritability, and Hypervigilance, explaining 62% of the variance. Symptoms reported "Often" or "Always" included feeling overwhelmed (24.7%), feeling tired (22.7%), and excessive worry (20.7%). In the regression model ($F(6,143) = 8.24$, $p < 0.001$, $R^2 = 0.26$), female gender ($\beta = 4.10$; 95% CI: 1.98–6.22; $p < 0.001$) and being 1–6 months after surgery ($\beta = 3.85$; 95% CI: 1.45–6.25; $p = 0.002$) predicted higher distress scores.

Conclusion: Psychological changes after surgery are common. Females and patients in the 1–6 month recovery period show higher distress.

Keywords: Post-operative, psychological changes, anxiety, depression, surgery, cross sectional.

Cite this Article as: *Tasleem M., Saeed H., Masood F., Shahzad H., Shahzad H., Faiz M.; Frequency of Psychological Changes in Surgical Patients: A Prospective Cross-Sectional Multi-Center Study. SIAL J Med. Sci. March-2026 V-4 (Issue-03, Overall Issue-15):33-37*

Author contribution:
TA; conceptualization of project, data collection, writing manuscript, statistical analysis, and final approval.
HS, FM, HS, HS, MF; data collection, drafting, and revision.

Submission completed: Nov, 2025
Review began: Nov, 2025
Review ended: Jan, 2026
Accepted: Feb, 2026
Published: March, 2026

Introduction

Surgery is a major life event that can bring pain, worry, and temporary disruption of daily life. Although healthcare teams focus on physical recovery, mental health effects such as anxiety, sadness, irritability, and

increased alertness (hyper-vigilance) are common and can delay the recovery and reduce the quality of life. Most published research comes from high income countries; local data are limited and many studies used untested questionnaires. This study uses a prospectively collected sample and a 20-item questionnaire that we tested for reliability and structure to give a clear local picture.

Objectives:

To find how often patients have psychological symptoms after surgery by testing with a 20 item questionnaire. To find out which demographic and surgery-related factors are associated with psychological changes in post-operative patients.

Methodology

A prospective cross-sectional study was conducted at five hospitals in Sialkot (Mohammadi Hospital, Allama Iqbal Memorial Teaching Hospital, Govt. Sardar Begum Teaching Hospital, Islam Central Hospital and Bashir Hospital) between 1st June and 10th of August 2025.

Consecutive sampling yielded 150 post-operative patients. Those having age ≥11 years with any surgical procedure but within six months of surgery were included. Patients who were unable to give consent (or assent when needed) or having major cognitive impairment were excluded.

This study was approved by the Institutional Review Board and Ethical Committee of Bashir Healthcare Services, Sialkot. Written informed consent was obtained from adult participants. For participants aged 11–17 years, written parental/guardian consent and participant assent were obtained. The study followed the Declaration of Helsinki. Participants' data were anonymized and stored on password-protected devices; only the research team had access to identifiable information.

Results

Participant characteristics Mean age = 37.2 ± 13.4 years. Females: 100 (66.7%). Most common procedures: cholecystectomy 24 (16.0%), C-section 22 (14.7%), and appendectomy 16 (10.7%). Time since surgery: <1 week 96 (64.0%), 1–4 weeks 32 (21.3%), 1–6 months 16 (10.7%), >6 months 6 (4.0%).

Characteristic	Category	n	%
Gender	Male	50	33.3
	Female	100	66.7
Age Group	11–20 years	20	13.3
	21–40 years	85	56.7
	41–60 years	35	23.3
	>60 years	10	6.7
Surgery Type	Cholecystectomy	24	16.0
	C-Section	22	14.7
	Appendectomy	16	10.7
	Thyroidectomy	10	6.7
	Hernioplasty	14	9.3
	Other	64	42.6
Duration since surgery	<1 week	96	64.0
	1–4 weeks	32	21.3
	1–6 months	16	10.7

Table 1. Baseline Demographic and Clinical Characteristics of Participants (N = 150)

Reliability and factor structure of the questionnaire Cronbach's α (coefficient alpha) = 0.92, indicating excellent reliability. Exploratory factor analysis showed four meaningful groups of items — Anxiety, Depression, Irritability, and Hypervigilance — which together explained about 62% of the total variance. Item loadings were consistent and communalities acceptable.

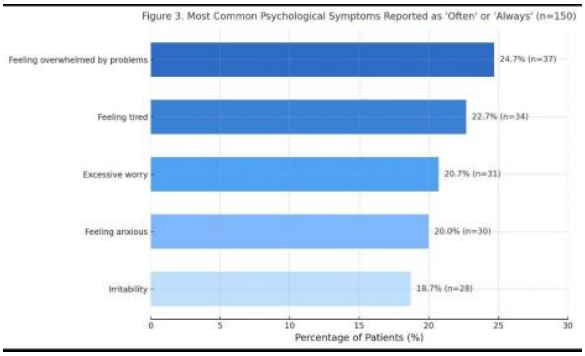

Figure. Top five psychological symptoms reported as "Often/Always" (Bar chart)

Predictors of psychological distress Multiple linear regression (total distress score as dependent variable) was significant: $F(6,143) = 8.24$, $p < 0.001$, $R^2 = 0.26$. Female gender was associated with higher distress ($\beta = 4.10$; 95%

CI: 1.98–6.22; p < 0.001). Being 1–6 months after surgery was associated with higher distress compared with <1 week (β = 3.85; 95% CI: 1.45–6.25; p = 0.002). Age and surgery type were not statistically significant.

Predictor	β (Coefficient)	95% CI	p-value
(Intercept)	22.10	18.45 – 25.75	<0.001
Gender (Female)	4.10	1.98 – 6.22	<0.001
Age	-0.02	-0.09 – 0.05	0.532
Surgery Duration; 1–4 weeks	2.15	-0.61 – 4.91	0.126
Surgery Duration: 1–6 months	3.85	1.45 – 6.25	0.002
Surgery Duration: >6 months	2.90	-1.22 – 7.02	0.167

Table 3. Multivariable Linear Regression Predictors of Total Psychological Distress Score

Analysis: Analyses were done in R (v4.3.0). We used descriptive statistics (counts, per-centages, means ± SD). Cronbach's α tested internal consistency. Exploratory factor analysis (principal axis factoring with oblique rotation) explored the question-naire's structure; a four-factor solution was kept based on eigenvalues and interpret-tability (explaining ≈62% variance). Group comparisons used t-tests or ANOVA as appropriate. Multiple linear regression mod-eled the total distress score with predictors: gender, age, surgery type, and time since surgery. We report β coefficients with 95% CIs and p-values; model fit shown by R^2.

Discussion

Our aim was to determine the frequency of psychological changes occurring in post-operative patients as well as the demo-graphic and surgical factors influencing it. On the basis of this aim, a prospective, multi-center study was conducted that shows that a meaningful number of patients experience psychological symptoms after surgery and these symptoms can continue into the months following surgery. A 20-item questionnaire was used as a screening tool, which performed well, showing the high reliability and a logical factor structure. Our results demonstrated that the post-operative recovery is often accompanied by significant psychological changes. Especially in the women where we can see higher rates of anxiety and depression. This aligns with previous research showing that the female patients are more likely to experience psychological distress in perioperative period.[2-5,6].

Biologically, hormonal fluctuations and stress related neuroendocrine responses may increase vulnerability to mood changes in women[4,8].

Some cultural factors influencing help seeking and reporting the behaviour also explain the higher observed rates[7]. There is also the higher score in the 1–6 month recovery window which suggests that psychological problems can persist beyond the immediate postoperative period 3 — possibly due to postoperative pain, limited mobility, dependence on care givers, and uncertainty about recovery[5,9,1]). Moreover residual anesthesia effects, inflammatory responses and neuroendocrine altera-tions following surgery can transiently affect mood and cognition[11,12].

Our finding is consistent with a broad body of literature demonstrating that surgery often triggers significant emotional and cognitive responses. Numerous studies have identi-fied the anxiety, depression, irritability and mood fluctuations as common postoperative psychological phenomena(13-15). Hinrichs-Rocker et al. reported that up to 30–50% of surgical patients experience postoperative psychological distress, with the anxiety and the depressive symptoms being the most frequent[13]. Similarly, Bedaso et al. found a high prevalence of pre- and postoperative anxiety among surgical patients, suggesting that psychological factors play an important role in recovery[16].

Jayaraman et al. observed that anxiety and depression tend to fluctuate during the recovery course, particularly in the early months following surgery[17]. This study

underscores the need to address psychological well-being as an integral part of post-operative care. Routine screening and early psychological support can help identify patients at risk of anxiety, depression, leading to better recovery and outcome. Mental health assessment promotes more holistic, patient centered approach to the recovery. The study has certain limitations that should be acknowledged. It is a cross sectional design with no causal claims, there is the use of self-reported data which may introduce the reporting bias. Modest sample size (N=150) limits generalizability of findings to a broader population. And an R2 of 0.26 showing other factors not captured. This study underscores the impor-tance of recognizing psychological changes as a key aspect of postoperative recovery. It highlights the need for the mental health screening and support in standard care. Future studies should include larger, longitudinal studies, and explore targeted interventions such as counseling and rehabilitation programs.

Conclusion:

Psychological changes after surgery are common and matter for recovery. The data reveals women and patients 1–6 months after surgery are at higher risk. Detecting these changes can help give better overall care. Routine screening and early mental health support should be the part of postoperative care as it can help improve patient's recovery and quality of life. Routine use of a short, validated screening questionnaire in follow up clinics could help detect the patients who need mental health support, especially women and those with longer recoveries.

Recommendations

The experience of undergoing surgery is an important life event that challenges a patient's not only physical but psychological wellbeing. While surgical and anesthetic techniques have advanced rapidly to minimize physical morbidity and mortality, attention is increasingly turning toward the patient's holistic recovery, which includes their mental and emotional well-being (1)

Disclaimer: None
Conflict of Interest: None
Source of Funding: None

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ORIGINAL ARTICLE

Association of PCOS with diet in females of reproductive system

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Submission completed: Jan, 2026
Review began: Feb, 2026
Review ended: Feb, 2026
Accepted: Feb, 2026
Published: March, 2026

Abstract

Objectives: To examine dietary habits in women diagnosed with PCOS and their possible links between specific diet patterns and PCOS

Methodology: A Cross-sectional study conducted in outpatient and gynecology departments of Chattha Hospital, Commissioner Road, Sialkot females aged 15–45 years visited from January to December 2025. Data was analyzed using SPSS. Permission from Ethics Committee was obtained.

Results: Out of 100 participants, 62% were found to consume, unhealthy diets, while 38% reported relatively healthy, dietary practices. High intake of refined carbohydrates, (70%), fast food (60%), and sugary drinks (55%) were prominent among patients. In contrast, only 30%, consumed adequate fruits and vegetables, and 25% consumed whole grains regularly.

Conclusion: This study concludes that dietary habits significantly influence the frequency and severity of PCOS in reproductive-age females. Unhealthy diets aggravate the syndrome, whereas healthy dietary patterns offer protective benefits.

Keywords: PCOS, SPSS, dietary, Carbohydrates, sugary drinks

Cite this Article as: *Chattha S, Babar N.S. & Sherazi S..; Association of PCOS with diet in females of reproductive system. SIAL J Med. Sci. March-2026 V-4 (Issue-03, Overall Issue-15):38-40*

Author contribution:
SC, NSB and SS; conceptualization of project, data collection, writing manuscript, statistical analysis, drafting, revision and final approval.

Introduction

Polycystic Ovary Syndrome (PCOS) is a common endocrine disorder among women of reproductive age, affecting around 6–20% depending on the diagnostic criteria used[1]. It is usually associated with symptoms like irregular periods, excess androgen levels, and polycystic ovaries. In recent years, diet has been identified as a modifiable factor that may influence the onset and severity of PCOS. Research shows that insulin resistance and high insulin levels, which are often seen in PCOS, are closely linked to dietary patterns.

Studies show that Western-style diets, which are high in refined sugars and trans fats, may worsen PCOS symptoms by increasing insulin resistance and inflame-mation[2]. On the other hand, Mediterranean diets—rich in whole grains, lean proteins, and healthy fats—are linked with better insulin response and hormonal balance in PCOS patients. However, most of this research comes from Western populations. There is limited data on how typical South Asian diets, which are generally high in carbohydrates and oils, affect PCOS.

Objectives: To examine dietary habits in women diagnosed with PCOS and their possible links between specific diet patterns and PCOS with reference to BMI.

- **Methodology**

Operational Definitions

PCOS: Diagnosis using the Rotterdam Criteria, which require at least two of the following: (1) irregular or absent ovulation, (2) signs of high androgen levels (clinical or lab-based), and (3) polycystic ovaries seen on ultrasound (Rotterdam ESHRE/ASRM, 2004)[4].

Diet: Assessed through a structured Food Frequency Questionnaire and 24-hour dietary recall.

Reproductive age: Females aged 15 to 45 years.

Participants completed the questionnaires about their diet and PCOS symptoms. PCOS diagnosis was confirmed using available medical records and ultrasound reports according to written down criteria.

A Cross-sectional study conducted in outpatient and gynecology departments of Chattha Hospital, Commissioner Road, Sialkot females aged 15–45 years visited from January to December 2025. Data was analyzed using SPSS. Permission from Ethics Committee was obtained.

Results

We found that 62% of the participants used intolerant un-healthy diet.

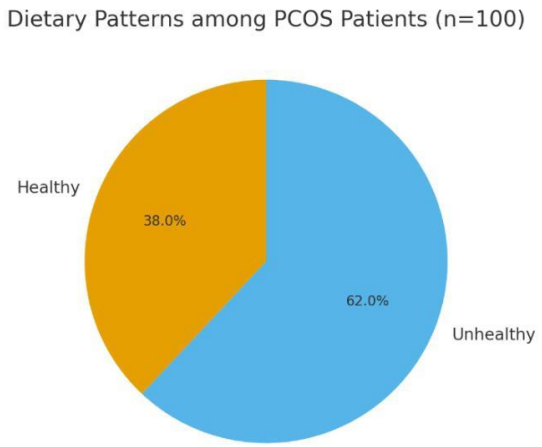

Figure 1:Pie chart showing 62% healthy and 38% unhealthy diet.

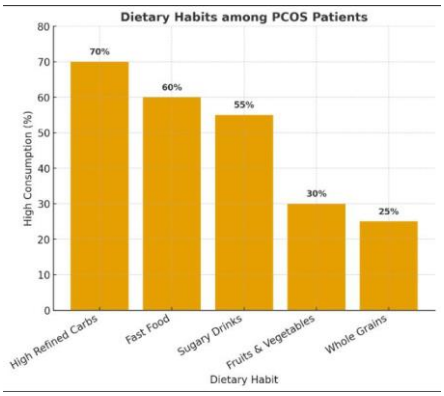

Figure 2: Distribution of dietary habits in PCOS patients

Dietary habit.	High consumption (%)
High refined carbs	70 %
Fast food	60%
Sugar drinks	55%
Fruits and vegetables	30%
Whole grains	25%

Table 1:Dietary habits in PCOS patients

Discussion

Frequent consumption of high-glycemic foods such as refined carbohydrates, sugary drinks, and fast food contributes to insulin resistance, which is a key driver of PCOS pathogenesis[4]. Conversely, diets rich in fruits, vegetables, and whole grains enhance insulin sensitivity and may reduce the severity of PCOS symptoms[5]. Our findings are consistent with international literature highlighting the significance of diet in PCOS management. Interventions targeting nutrition and lifestyle not only improve reproductive outcomes but also reduce long-term risks such as type 2 diabetes and cardiovascular diseases[6].

Conclusion

This study concludes that dietary habits significantly influence the frequency and severity of PCOS in reproductive-age females. Unhealthy diets aggravate the syndrome, whereas healthy dietary patterns offer protective benefits.

Recommendations

Integrating dietary counseling into gynecological care and promoting lifestyle interventions could serve as sustainable, cost-effective strategies for PCOS management. Future research with larger cohorts and longitudinal designs is needed to establish causal relationships and develop standardized dietary guidelines for PCOS patients.

Disclaimer: None
Conflict of Interest: None
Source of Funding: None

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