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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 5th volume, Issue-1 and overall 17th 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).

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This is September-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

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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.

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2. The study **methods** are appropriate
3. **Data** are sound
4. The **discussion** should contain international reference regarding results
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SIAL JOURNAL OF MEDICAL SCIENCES
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Introduction	Is the Introduction relevant?	
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Discussion	Whether all variables present in results are discussed here and compared with international and national studies.	
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Part-B

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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) <u>Guideline:</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		

Part-E

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15.	If the study involves distribution of questionnaires to the participants, has the right to Response Omission and Anonymity been provided to them?			
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EDITORIAL;**Nutrition in 1000 days/ Maternal Child Health**Asma¹, Masood²**Author's Affiliation:**

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Author contribution:

SABB; Literature search, drafting.

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

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Nutrition plays a major role in maternal and child health and it is widely recognized that optimum nutrition in early life is the foundation for long-term health. A healthy maternal dietary pattern, along with adequate maternal body composition, metabolism and placental nutrient supply, reduces the risk of maternal, fetal mortality and morbidity and long-term effects in the offspring. While under-nutrition is mainly an issue of low-income countries, malnutrition, due to poor quality diet, is becoming a global health problem.

Nutrition of Child Bearing Mothers

There should be a Food fortification programmes for mothers such as

- Salt iodization
- Fortification (of wheat flour, rice)
- Cooking oil , Fresh Fruits with vitamins
- Iron, folic acid and Calcium

Nutrition for Nursing Mothers

- Healthy Food
- Iron
- Folic acid
- Calcium
- Vitamin D
- Other Multi-Vitamins

Pre-conceptional counseling of women of childbearing age should spread awareness of the importance of maternal nutrition before and during pregnancy and should promote a cultural lifestyle change, in favor of a healthy weight before conceiving and balanced healthy diet with high-quality foods consumption. Supplementation and/or fortification can make a contribution when recommended micronutrient intakes are difficult to be met through food alone.

Pregnant woman's well-being, diet, and stress levels likely affect the development of her unborn child. After birth, the child's physical environment, nutrition, and relationships may have a long-term effect on their well-being and health.

Brain and Body suffer irreparable damage in first 1000 days of life.

During this stage, a child's ability to grow can be affected by maternal and child nutrition and health. According to specialists, a child's developing brain and body suffer irreparable damage from insufficient nutrition in the first 1,000 days of life.

The feeding and care needed by the expectant mother throughout the first trimester of her pregnancy impact the first 1,000 days of the pregnancy itself. Early pregnancy discovery is crucial to ensure the window of opportunity presented as of the first 1,000 days is used to give the child and mother a good future. The window of opportunity to remedy some deficiencies shortens as it ages, becoming a challenge for a grown-up or older child to handle the health difficulties brought on by a deficit. However, some deficiencies can be partially remedied later in life.

The 1,000 days hold both great possibility and great fragility in a child's life. The ability of a child to develop, learn, and thrive is significantly impacted by how well or how poorly mothers and children are fed and cared for throughout this period. This is because the developing brain of a child grows and develops throughout the first 1,000 days. This is also the period when the foundations for their long-term health are set.

Children's brains can create 1,000 new neural connections every second throughout this time. The connections that a three year old brain forms provide the foundation for their future because it is twice as busy as an adult's brain. Achieving both physical and mental wellness is a lifetime goal.

H.C 35 cm at Birth	} 11 cm increase in 01 year (Birth to 01 year)	} 16 cm increase in 05 years
HC 46 cm at 01 year		
HC 51 cm at 5 year	} 5 cm increase in 04 year (1 year to 05 year)	
HC 56 cm at 30 year	} 5 cm increase in 25 years (6 years to 30 years)	

Significance of Child Nutrition

- Brain and Physical Growth: Essential nutrients support rapid brain development and physical growth, preventing stunting (short height for age) and wasting (low weight for height).
- Immune System Strength: Well-nourished children have better immunity, reducing the incidence of infection and death, as under-nutrition contributes to 45% of child deaths.
- Long-Term Health: Proper early nutrition reduces the risk of obesity, type 2 diabetes, and cardiovascular diseases later in life.

Key Nutritional Periods

- Pre-conception: Establishing healthy body composition and nutrient reserves.
- Pregnancy & Lactation: High nutrient demand for organ development and breastfeeding.
- First 1,000 Days: This critical period (conception to age two) determines the child's long-term health, cognitive ability, and metabolic health.
- Optimal nutrition prevents the intergenerational cycle

Malnutrition in Mothers

Malnutrition is associated with numerous health problems, such as obesity and impaired growth. Prenatally, the seeds of a baby's health are sown, and they develop throughout early development and the effects of the first 1,000 days on psychological and physical health. Pregnant woman's wellbeing, diet and stress levels likely affect the development of her unborn child.

The child's health suffers when the mother's diet and health are impaired.

Contrarily, malnutrition in mothers, such as under-nutrition or excessive weight gain, has been connected with negative results, including low birth weight, poor neurodevelopment, and increased susceptibility to chronic diseases in later life.

The mother's mental health, including emotional equilibrium and psychological stability, significantly impacts the child's development. Stress, anxiety, and depression experienced by mothers during pregnancy harm the developing foetus and increase the risk of cognitive, behavioural, and emotional difficulties in the offspring. The growing fetus is exposed to high levels of stress hormones due to chronic maternal stress, which might alter the fetus's brain's shape and function.

Synergistic relationship between maternal nutrition and mental health

Factors influencing child development outcomes include maternal-infant attachment, breastfeeding start and duration, and general caring practices. A comprehensive approach is critical since new research indicates a synergistic relationship between maternal nutrition and mental health. Inadequate nutritional intake might result from maternal mental health.

Management for Under Nourished Children

- 50% CHO, 30% Fat, 20% Proteins, Balance Diet
- Iron, Folic Acid, Vitamin-A, Vitamin D, Vitamin B-Complex, Vitamin-C, Zinc, Iodine, and Calcium
- Omega-3 fatty acids reduces risk of developmental delays and improves cognitive performance.
- Improve access to affordable nutritious foods including fruits, vegetables, eggs, fish, meat and fortified foods - for all adolescent girls and women.

Recommendation

Nutrition governance for adolescent girls and women

Build bolder leadership to mobilize institutions, leverage resources and galvanize actions for adolescent girls' and women's nutrition more effectively.

Implement policies and mandatory legal measures to protect adolescent girls and women from nutrient-poor and unhealthy ultra-processed foods and beverages.

Disseminate Information to masses

Use multiple communication channels (print, broadcast, social and digital media) to reach adolescent girls, women and the general public with advice on nutrition and care practices.

Strengthen the coverage and quality of counselling to help adolescent girls, women, and their family members make decisions and take action to improve nutrition.

Revisit Policies

Implement gender-transformative policies and legal measures that strengthen the social and economic empowerment of adolescent girls and women.

Accelerate the elimination of discriminatory gender and social norms to enable adolescent girls and women to realize their rights to food and nutrition.

Take Home Message

- Improve access to essential nutrition services for adolescent girls and women before and during pregnancy and while breastfeeding. including in humanitarian crises.
- Expand access to social transfer programmes for adolescent girls and women, including in fragile settings and humanitarian crises.
- Exclusive breast feeding for infants till 6 months age
- Balanced and high fat diet for children over 06 months
- Vegetables, fruits, eggs, butter, and milk for children 6 months to 05 years

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ORIGINAL ARTICLE**Association of Screen Time in Autistic and Non-Autistic Patients and Their Prognosis**

Syeda Fatima Masood

Affiliations Speech Therapist, Bashir Health Services, Sialkot 0308-0899100 Corresponding Author: Syeda Fatima Masood, Speech Therapist, Bashir Health Services, Sialkot M.Sc (Psychiatry) (pb), M.Phil/ M.S (S.L.P) (RIFA) 0308-0899100 Fatimagillani85@yahoo.com Submission completed: Jan, 2026 Review began: Feb, 2026 Review ended: April, 2026 Accepted: May, 2026 Published: Sept, 2026	ABSTRACT Objective: To recognize whether screen time have any impact on the delayed speech of autistic and non-autistic children and on their outcome. Methodology: A cohort study was designed and we selected 10 patients of Autism of 4—6 years of age and 10 patients of other causes of delayed speech having screen time 1 to 6 hours/day. Then we gave them speech therapy, physio-therapy and behavioural therapy to both groups for 3 to 6 months and saw their prognosis. Results: Improvement in delayed speech was seen 35% to 50% in both groups. Conclusion: There is No Impact of screen time in autistic children Key words: Autism, delayed speech, speech therapy, physio-therapy and behavioural therapy etc. Cite this Article as: Masood S.F.,; Association of Screen Time in Autistic and Non-Autistic Patients and Their Prognosis. SIAL J Med. Sci. Sept-2026 V-4 (Issue-5, Overall Issue 17):20-23 Author contribution: SFM: Designed the research Pattern and drafted the manuscript.
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Introduction

The pervasive integration of digital technology into daily routines has precipitously escalated screen time among the pediatric populations. Consequently, it is incumbent upon educators and guardians to critically evaluate the adverse implications of excessive media consumption on early language acquisition and linguistic proficiency.¹

Screen time does not cause autism, as Autism Spectrum Disorder (ASD) is primarily rooted in genetics and biology. However, research indicates an association between the heavy, early-life screen exposure (more than 04 hours / day) and the development of autism-like symptoms, delayed social skills, and exacerbated behavioral issues.²

Research suggests children with subtle, the early signs of autism (or a genetic predisposition) may be more drawn to the screens,

leading to the heavier use than neurotypical children.²

For children already diagnosed with ASD, excessive daily screen viewing can worsen communication delays, the short attention spans, and sensory / behavioral challenges. The danger of screen media in early development lies in distraction. It can isolate children from crucial face-to-face social interactions and distract caregivers from engaging with the child.³

Leading pediatric and autism research organizations emphasize regulating media intake to prevent developmental setbacks. The American Academy of Pediatrics (AAP) recommends strictly avoiding screen media (aside from video chatting) for children younger than 18 to 24 months, and limiting use to no more than one hour per day for children ages 2 to 5.

If screens are used, the caregivers should have co-view programs with the child to promote learning and social interaction, rather than using screens as a passive babysitting tool.³

Objective

To recognize whether screen time have any impact on the delayed speech of autistic and non-autistic patients and outcome.

Methodology

A cohort study was designed and we selected 10 patients of Autism of 3—5 years of age and 10 patients of other causes of delayed speech having screen time 1 to 6 hours/day. Then we gave them speech therapy, physiotherapy and behavioural therapy to both groups for 3 to 6 months and saw their prognosis during my Clinical Practice as speech Therapist at Bashir Health Services, Sialkot and at my own clinic in Sialkot.

Results;

No significant difference seen in both groups. No describable impact of screen time in seen in autistic patients as for as delayed speech in concern, whether a child have screen time one hour or six hour.

Distribution of cases according to screen time in autistic patient:

Screen Time	No. of Patients	Percentage %
0-3 Hours	05	50%
4-6 Hours	05	50%

	Autism Group	delayed speech group
Age	3 to 5 years	3 to 5 years
Socio-Economic Status		
High	05	03
Inter	04	04
Low	01	03

Geographic status		
Urban	08	06
Rural	02	04
Prognosis	0—10 No. 35% to 50%	0—10 No. 35% to 50%

Discussion

High volumes of digital media consumption can detrimentally influence a child's linguistic, physical, and socio-emotional trajectories. To mitigate these risks, the American Academy of Pediatrics (AAP) advises total avoidance of digital media for infants under 18 to 24 months, and a strict limitation of one hour per day for children aged 2 to 5 years⁴.

Empirically supporting these constraints, recent cohort data evaluating early media exposure identified a statistically significant correlation between prolonged screen viewing in 1-year-old males and a subsequent diagnosis of the Autism Spectrum Disorder (ASD) at age 3. Notably, however, precise threshold of daily exposure and the longitudinal duration required to precipitate such diagnostic outcomes remain un-quantified in the literature.

"Although the association between autism and screen time is still being studied, it's important for parents to regulate and control their child's screen time, especially among babies and toddlers,"⁵

Furthermore, prolonged media exposure can impede a child's socio-emotional and interpersonal development. Pervasive engagement with digital devices, including smartphones, tablets, computers, and televisions substantially diminishes opportunities for interactive play with peers and primary caregivers. Investigating intersection of media usage and developmental disorders, researchers evaluating the correlation between screen time, symptom severity, and developmental quotients in children with Autism Spectrum Disorder (ASD) determined that

Association of Screen Time in Autistic and Non-Autistic Patients and Their Prognosis

increased screen duration directly correlates with heightened ASD symptom severity, particularly regarding sensory processing deficits. This compounding developmental delay was most pronounced in younger cohorts with elevated screen exposure, specifically manifesting within the linguistic domain ^{6,7}.

Crucially, however, the direction of causality remains a subject of ongoing empirical debate. The literature indicates that older children presenting with more profound autistic phenotypes frequently exhibit a higher propensity for media consumption due to pre-existing deficits in reciprocal social interaction. Consequently, these observations may reflect the baseline severity of the underlying pathology rather than a direct consequence of digital media exposure ^{6,7}.

Beyond total duration, the qualitative attributes of digital content serve as a critical variable. Exposure to suboptimal linguistic environments, such as rapid-paced animations characterized by sparse dialogue, fails to provide the structural linguistic stimulation requisite for normative communication development. Compounding this, the chronological age of initial exposure serves as a critical predictor for subsequent language delays, with contemporary literature reinforcing that media exposure during the first 24 months of life is associated with adverse developmental outcomes^{8,9}.

Conclusion

No impact of screen time is seen in autism. Autism is a genetic disorder and is not curable. However, it is manageable with speech therapy, physio-therapy and behavioural therapy for the whole life like other causes of delayed speech.

Recommendations

Digital media should not function as a surrogate caregiver; utilizing screen time purely as a mechanism for behavioral distraction frequently detracts from its potential educational utility. When media consumption

occurs, it must be highly intentional and strictly regulated. Notably, in response to the escalation of device usage during global public health crises:

- a. **Establish Structural and Spatial Boundaries:** Implementing clear limitations and designating strict screen-free zones, particularly during meals and within bedrooms, prioritizes high value, interactive behaviors such as shared reading and cooperative play.
- b. **Prioritize Qualitative Content Selection:** Empirical evidence suggests that the qualitative attributes of media programming may exert a more profound influence on language acquisition than the total viewing duration. Caregivers should select evidence-based educational applications that stimulate active cognitive engagement and offer robust linguistic modeling, rather than passive entertainment that serves merely to distract.
- c. **Practice Active Co-Viewing and Joint Media Engagement:** Engaging in co-viewing allows caregivers to provide verbal commentary, pose open-ended questions, and maintain a running dialogue during media use. Literature indicates that children who experience dyadic interaction during screen exposure demonstrate superior linguistic outcomes, reinforcing the premise that interpersonal verbal exchange remains indispensable for communication development.
- d. **Maintain a Balanced Behavioral Ecology:** Media consumption must be carefully balanced with rich, real-world experiences. Ensuring that children regularly participate in unstructured outdoor play, peer socialization, and tactile, hands-on activities provides critical, multimodal communication opportunities that cannot be replicated by digital interfaces.

- e. **Model Healthy Media Practices:** Because pediatric populations learn behaviors through observational modeling, caregivers must demonstrate regulated, healthy media habits themselves.
- f. **Nuanced Cognitive Benefits of Structured Media Exposure;** Conversely, when properly managed, digital media can yield positive effects on cognitive development, higher-order language acquisition, and literacy skills, particularly in children over 24 months of age. Longitudinal observations indicate that sufficient, repetitive exposure to pedagogical content enhances problem-solving capabilities, imitative learning, and lexical acquisition.

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ORIGINAL ARTICLE**Perception of Addiction as a Stress-Relieving Mechanism among Medical Students**

Mohammad Mateen Shahid

Affiliations Neurologist, Mohammadi Hospital, Khadim Ali Road, Sialkot. Corresponding Author: Dr. Mohammad Mateen Shahid, Neurologist, Mohammadi Hospital, Khadim Ali Road, Sialkot. Cell # 0332-8644563 Email. mateen.shahid49@gmail.com CNIC # 34603-3938639-3 Submission complete: March, 2026 Review began: April, 2026 Review ended; April, 2026 Acceptance: May, 2026 Published: September, 2026 Author contribution: MMS; Conceptualization of project, literature search, writing manuscript, drafting,	Abstract Objectives: To describe the frequency of stress among MBBS medical students and their perception about addiction as a stress-relieving mechanism (coping strategies). Methodology: A descriptive cross-sectional survey was conducted among a total of 131 medical MBBS students to assess their stress levels coping mechanisms and patterns of potentially addictive behaviors. Results: Among the 131 respondents, 56% were female and 41% were male, reflecting a balanced gender distribution. A significant majority of the participants reported experiencing frequent academic stress which they attributed to the demanding workload long study hours and continuous examinations inherent in medical training. Conclusion: Medical MBBS students frequently encounter overwhelming academic pressure due to the demanding nature of their studies long hours and constant performance expectations. This persistent stress often drives some students to seek temporary relief through addictive behaviors such as excessive use of social media caffeine nicotine or even substance abuse. Cite this Article as: Shahid M.M.,; <i>Perception of Addiction as a Stress-Relieving Mechanism among Medical Students. SIAL J Med. Sci. Sept-2026 V-5 (Issue-1, Overall Issue-17):24-28</i>
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Introduction

Addiction can be defined as a chronic condition in which an individual develops a compulsive need to use a substance or engage in a behavior despite being aware of its harmful consequences. It is characterized by loss of control, cravings, and persistence of the behavior even when it interferes with health, relationships, or daily responsibilities. Addiction is no longer seen simply as a lack of willpower, but rather as a complex

medical condition that affects the brain and behavior. The American Society of Addiction Medicine describes addiction as a treatable disease influenced by a person's genetics, the environment, and life experiences¹. At the same time, some theories, such as the self-medication hypothesis, suggest that individuals may turn to addictive behaviors as a way of coping with stress or emotional pain. In this sense, addiction is not just a medical disorder, but also a mal-adaptive

coping mechanism that people may rely on when faced with overwhelming pressure.

Medical students, in particular, experience unique challenges such as academic overload, long study hours, clinical stress, and emotional exhaustion. These pressures may shape how they view addiction, not only as a disease but also as a potential, though harmful, strategy to cope with stress. Understanding their perception is therefore essential in order to address both of the prevention and the support strategies within this vulnerable group.¹

Previous studies consistently demonstrate high levels of psychological distress among medical students, with prevalence rates of stress and burnout ranging from 30% to 70%. Research also suggests that such a stress often results in maladaptive coping mechanisms, including substance use and behavioral addictions.¹

This study aims to explore how medical students perceive addiction as a means of stress relief. By understanding the attitudes and beliefs of the participants, the research seeks to inform better mental health interventions and promote healthier coping mechanisms within medical education environment.

Although the medical college curriculum is designed to achieve these core objectives, certain elements of the training process can inadvertently compromise students' psychological well-being. At an individual level, this distress is strongly associated with adverse outcomes, including substance abuse, interpersonal conflict, suicidal ideation, and increased attrition rates.²

Objectives:

To describe the frequency of stress among MBBS medical students and their perception about addiction as a stress relieving mechanism (coping strategies).

Methodology

A descriptive cross-sectional survey was conducted among a total of 131 medical students to assess their stress levels, coping mechanisms, and patterns of potentially addictive behaviors. The study aimed to gain a clearer understanding of how medical students manage academic pressure and the extent to which certain behaviors are used as the stress-relief strategies. Data were gathered using a structured online questionnaire that included sections on demographic information such as age, gender, and year of study, as well as the frequency and sources of academic stress. The questionnaire also explored the types of coping methods adopted by students ranging from healthy strategies like exercise or social interaction to maladaptive ones such as excessive gaming, caffeine consumption, or social media use.

Participants were further presented with a series of perception statements related to stress and coping behaviors, which they rated on a five-point Likert scale, allowing for the evaluation of their attitudes and awareness regarding these issues. The responses were analyzed using descriptive statistical methods to identify trends and patterns within the data. The results were then summarized and visually represented using pie charts and bar graphs for clearer interpretation and presentation of findings.

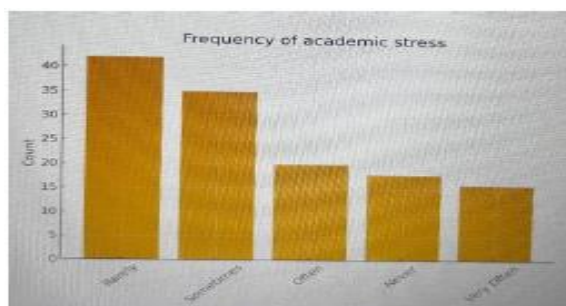
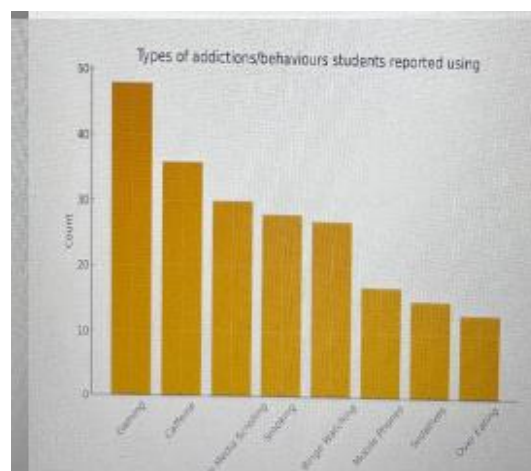
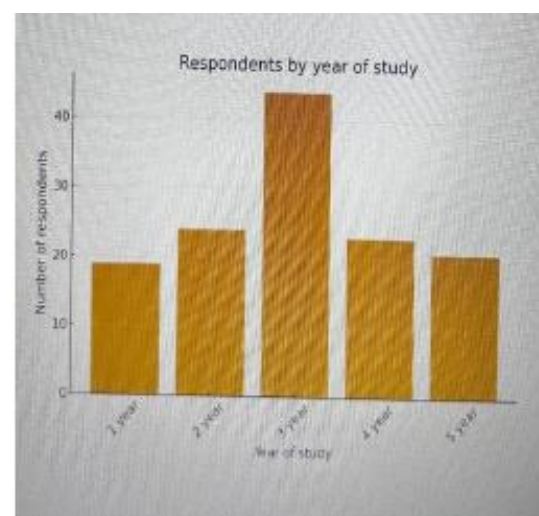
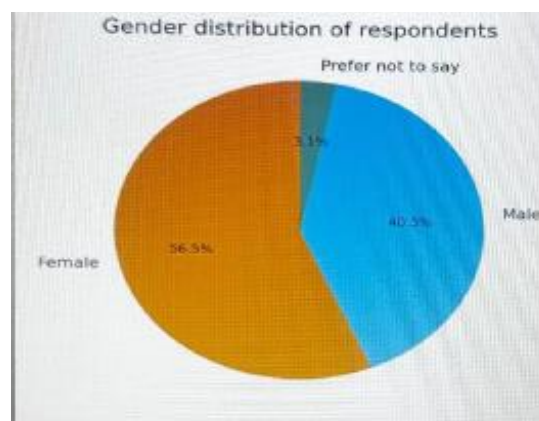
Ethical considerations were strictly maintained throughout the study. Participation was entirely voluntary, and respondents were informed about the purpose and confidentiality of the research before providing consent. Anonymity of participants was ensured, with no identifying information collected or disclosed. These ethical safeguards aimed to create a comfortable environment that encouraged honest and acc-

urate responses, thereby enhancing the credibility and reliability of the study's findings.

Results

Among the 131 respondents, 56% were female and 41% were male, reflecting a balanced gender distribution. A significant majority of the participants reported experiencing frequent academic stress, which they attributed to the demanding workload, long study hours, and continuous examinations inherent in medical training.

When asked about their coping strategies, students commonly mentioned engaging in activities such as gaming, listening to music, scrolling through social media, and consuming caffeine to stay alert and manage fatigue. These behaviors were identified as the most accessible and immediate sources of stress relief, despite their potential to develop into addictive patterns over time. Furthermore, a notable portion of respondents agreed that such behaviors serve as temporary escapes from the pressures of medical college rather than long-term solutions. Many also acknowledged that peer influence significantly contributes to the adoption and reinforcement of these habits, as students often share similar stressors and coping practices within their social circles. The key findings of the study are visually represented through pie and bar charts, offering a clear and comprehensive overview of the patterns observed among participants.



Discussion

Concurrently, while exercise is frequently utilized as a coping mechanism, it can manifest maladaptively as exercise addiction, a

dysfunctional behavior characterized by dependence that results in physiological, psychological, and social impairment².

Notably, literature lacks a robust conceptual distinction regarding how these problematic behaviors differ between team-based and individual exercise modalities². Given the substantial prevalence of the psychological morbidity, systemic institutional interventions, such as targeted counseling, social support systems, and structured stress-management training, are critical to safeguarding student quality of life³.

The transition to higher education, particularly within medical curricula, represents a period of heightened vulnerability for student psychological well-being. At an individual level, this chronic distress manifests in severe adverse outcomes, including substance misuse, interpersonal conflict, attrition, and suicidality^{4,5}.

Furthermore, macro-level data from frameworks like EUROSTUDENT 8 highlight that these mental health trajectories are further compounded by the global crises (e.g., the COVID-19 pandemic) and vary internationally based on cultural stigma, healthcare infrastructure, and institutional support mechanisms⁶.

This study underscores the concerning prevalence of potentially addictive behaviors adopted by medical students as a means to cope with academic and emotional stress. The findings reveal that behavioral addictions such as excessive gaming and social media use are the most common, serving as easily accessible outlets for distraction and temporary relief. Among substance-related habits, caffeine consumption emerged as the most dominant, likely due to its widespread availability and perceived benefits in enhancing alertness and concentration during long study hours.⁶

Peer influence, academic pressure, and the competitive environment of medical education appear to play a significant role in reinforcing these coping patterns. Many students, despite being fully aware of the negative consequences and long-term risks associated with such behaviors, continue to engage in them because of the immediate psychological comfort and escape they offer from their demanding routines. This paradox highlights the urgent need for institutional support and early intervention.⁷

Conclusion:

Medical students frequently encounter overwhelming academic pressure due to the demanding nature of their studies, long study hours, and the constant performance expectations. This persistent stress often drives some students to seek temporary relief through addictive behaviors such as excessive use of social media, caffeine, nicotine, or even substance abuse.

Recommendations:

1. Structured stress and time management education;

While these behaviors may offer short-term comfort, they can have serious long-term consequences for both the mental and physical health. Therefore, it is essential for the medical institutions to take an active role in addressing this issue. They should integrate structured stress management education into the curriculum, helping students develop healthy coping mechanisms such as mindfulness, physical activity, and time management skills.

2. Awareness counseling and mental health programs;

Additionally, institutions must work to raise awareness about the risks associated with addiction and ensure that

counseling and psychological support services are easily accessible and stigma-free. By implementing proactive and compassionate mental health programs, medical college can significantly reduce students' reliance on harmful coping strategies and foster a supportive environment that promotes emotional well-being and academic success.

3. **Emotional resilience skills;**

Medical colleges should take proactive measures by introducing targeted educational programs that not only inform students about the dangers of addiction but also teach effective stress management and emotional resilience skills. Moreover, counseling services should be made easily accessible, confidential, and free of stigma, encouraging students to seek help without fear of judgment. By addressing the root causes of stress and promoting healthier coping mechanisms, such as mindfulness, exercise, and peer support the institutions can play a crucial role in improving students' mental well-being and reducing their dependence on maladaptive behaviors.

Disclaimer: None

Conflict of Interest: None

Source of Funding: None

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ORIGINAL ARTICLE**Road Traffic Accidents; Modern Causes and Trends among RTA Patients.**

Amna Saeed¹, Hamna Rasheed², Kinza Zulfikar³, Jannat Jamil⁴, Maryam Shehzadi⁵, Amna Nisar Dar⁶, Ayesha Nawaz⁷, Fatima Munir⁸, Ghulam Ayesha⁹, Shumael¹⁰

Affiliations 4th Year MBBS Students, Sialkot Medical College, Sialkot Corresponding Author: Amna Saeed, 4th Year MBBS Students, Sialkot Medical College, Sialkot Contact No. 0331-6629114 amnasaheed007@gmail.com CNIC: 34602-6180100-2 Submission complete: Sept., 2025 Review began: Oct, 2025 Review ended: Dec, 2025 Acceptance: March, 2026 Published: Sept, 2026 Author contribution: AS: conceptualization of project HR, KZ, JJ & MS; Data Collection AN, AN, FM, & S; Writing GA: Approval	Abstract Objectives: Road traffic accidents (RTAs) are a growing public health concern in Pakistan, particularly in urban areas. This study aims to investigate the modern causes and trends of RTAs among patients in Sialkot City. Methodology: A descriptive cross-sectional study was conducted using data collected from major hospitals. A sample of RTA patients was selected to complete a questionnaire, gathering information on the circumstances surrounding the accidents. The data was analyzed using descriptive and inferential statistics to identify significant patterns and correlations. Results: The majority of the RTA patients were males (67.2%, n= 336) aged 21-40 years. The most common occupation was drivers (54.6%, n= 273), followed by students (45.4%, n= 227). Human error was the leading cause, followed by road conditions and vehicle-related factors: • Distracted driving (excluding mobile phones): 100 patients (20%) - e.g., eating. • Speeding/Reckless driving: 150 patients (30%) • Failure to Yield/Disobeying Traffic Signs: 138 patients (27.6%) • For mobile phone usage: • Using a mobile phone: 110 (22%) • Not using a mobile phone: 390 (78%) • Most RTAs occurred during peak time hours (7 am-9 am and 4 pm-6 pm) (55.1%, n = 250) Conclusion: The study emphasizes the necessity of targeted interventions to mitigate human error, enhance road conditions, and foster safe driving practices in Sialkot City. The findings underscore the dominant role of human error, particularly in speeding and phone usage. Keywords: . Cite this Article as: Saeed A et al.; Road Traffic Accidents; Modern Causes and Trends among RTA Patients. <i>SIAL J Med. Sci. Sept-2026 V-5 (Issue-1, Overall Issue-17): 29-32</i>
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Introduction

Every year almost 1.3 million people lose their lives as a result of road traffic accidents, contributing to above 3500 deaths per day world-wide. The aim of this study was to assess the frequency and distribution of RTAs leading to fatality.¹

Globally, distracted driving accounts for a large proportion of RTAs, with mobile phone use being a major contributor. According to the WHO, the use of mobile phones while driving increases the risk of a crash by four times.²

In Pakistan, recent statistics from Pakistan Bureau of Statistics indicate a persistent rise

in the urban accidents. While most data focus on metropolitan areas like Lahore and Karachi, limited literature exists specifically for mid-sized urban centers like Sialkot.³

A local hospital-based study by Hussain et al. found that over 40% of RTA patients admitted to Sialkot's emergency departments were involved in distracted driving, often linked to smartphone use.⁴

Another local observation by Malik and Zafar highlighted that urban road planning in Sialkot fails to meet traffic safety standards, increasing the risk of collisions. This gap in localized research underlines the importance of studying Sialkot's unique tra-

Road Traffic Accidents; Modern Causes and Trends among RTA Patients.

ffic and urban conditions to propose effective, city-specific interventions.⁴

Objectives:

- To investigate the role of smartphone use in road traffic accidents among the patients in Sialkot.
- To identify trends in RTA demographics, causes, and injury patterns in Sialkot city
- To assess how urban factors like traffic congestion, road conditions, and law enforcement contribute to RTAs.
- To provide data-driven recommendation for urban traffic policy in Sialkot.

Methodology

A descriptive cross-sectional study was conducted using data collected from major hospitals. A sample of RTA patients was selected to complete a questionnaire, gathering information on the circumstances surrounding the accidents. The data was analyzed using descriptive and inferential statistics to identify significant patterns and correlations.

Operational Definitions:

- RTA (Road Traffic Accident): An incident involving vehicles that leads to injury and requires emergency treatment.
- Urban Area (Sialkot): Geographical and administrative boundaries of Sialkot city, excluding rural or peri-urban regions.
- Smartphone Usage While Driving: Use of a mobile phone for texting, calling, browsing, or navigation during vehicle operation.
- RTA Patient: Any individual who sustained injuries from a road traffic accident and was admitted to an emergency unit in Sialkot.

Study Design: Descriptive cross-sectional study conducted in the Emergency departments of two major hospitals in Sialkot, Allama Iqbal Memorial Teaching Hospital and Imran Idrees Teaching Hospital (IITH) during 01-01-2026 to 30-06-2026.

Non-probability consecutive sampling was used to include all eligible RTA patients presenting during the study period.

A structured questionnaire was administered to each patient (or an attendant if the patient was incapacitated).

We included in the study;

- RTA patients aged 10–60 years presenting to emergency departments in Sialkot city.
- Patients are conscious and medically stable enough to provide consent or information.
- Patients involved in accidents within Sialkot city limits.

But following were excluded;

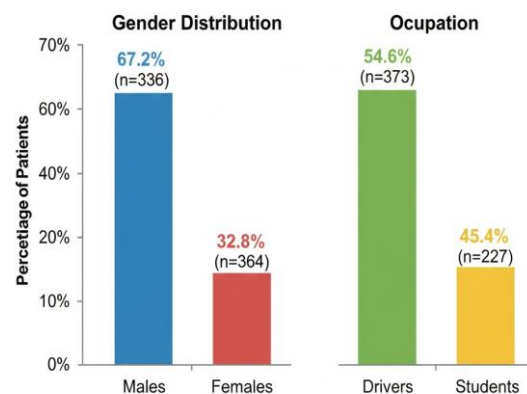
- Patients from rural or outside city areas.
- Patients below 10 or above 60.
- Patients who are unwilling to consent.
- RTAs due to non-vehicular causes (e.g., falls, assault).

The data were analyzed using SPSS version 25.

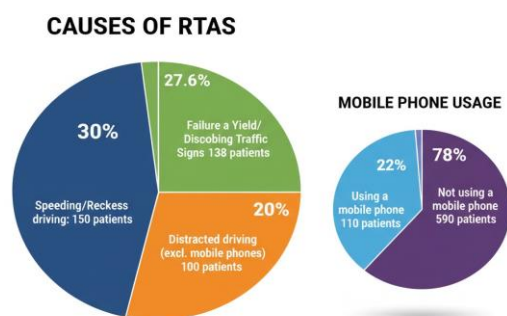
Chi-square and logistic regression tests were used to assess associations between smartphone use and accident severity.

Results

Road Traffic Accident Patient Demographics



Age Group: 21-40 years (most common)



Discussion

Road Traffic Accidents (RTAs) represent a significant public health and safety concern in urban Pakistan. In rapidly urbanizing cities like Sialkot, an increase in vehicular traffic, inadequate infrastructure, and the rising use of smartphones while driving have collectively contributed to a sharp rise in road mishaps.⁴

Sialkot, a growing industrial and commercial city, is witnessing expanding road networks and an increasing number of private and commercial vehicles. With the urban expansion comes the challenge of managing traffic and ensuring road safety.⁴

A growing concern is smartphone-induced distracted driving, especially among young adults, motorcyclists, and delivery riders. Furthermore, unregulated urban growth has led to poor signage, a lack of pedestrian lanes, and minimal enforcement of traffic laws.⁵

The study aims to explore the modern causes and emerging trends of RTAs among patients in Sialkot, with a special focus on smartphone usage and urban traffic behaviours.⁵

The results highlight how important it is to improve emergency systems, enforce traffic laws, and raise public awareness in order to reduce RTAs.⁶

In Azad Jammu Kashmir there were 5263 major road traffic accidents during the period studied, causing 2317 the deaths and 12963 injuries.⁷

Unfortunately, accident data collection in Pakistan is highly inadequate and not consistent with international standards.⁸

Road traffic injuries (RTIs) are one of the leading causes of death among productive age group. Using systems approach framework (SAF), current preventive strategies for RTI control were reviewed in Pakistan. A review of the literature was done using four international search engines. Only ten studies on preventive strategies for RTI stemming from Pakistan were found. The first Road Traffic Injuries Research Network (RTIRN) surveillance system for road traffic injuries was established in urban city (Karachi) in Pakistan has shown promise for injury control and should be scaled up to other cities. Enforcement of traffic laws on seat-belt and helmet wearing is poor. National Highway and Motorway Police Ordinance (2000) was one of the few legislative measure so far taken in Pakistan. Using SAF, efforts are required to implement interventions targeting human, vehicle design and also making environment safer for road users.⁹

Conclusion:

The study emphasizes the necessity of targeted interventions to mitigate human error, enhance road conditions, and foster safe driving practices in Sialkot City. The findings underscore the dominant role of human error, particularly in speeding and phone usage. To mitigate the impact of RTAs, policymakers must prioritize evidence based strategies, including improved road infrastructure, public awareness campaigns, and strict enforcement of traffic laws. By addressing these concerns, Sialkot City can reduce the burden of RTAs and create a safer transportation environment for its residents.

Recommendations

To mitigate the impact of RTAs, policy-makers must prioritize evidence based strategies, including improved road infrastructure, public awareness campaigns, and strict

enforcement of traffic laws. By addressing these concerns, Sialkot City can reduce the burden of RTAs and create a safer transportation environment for its residents.

Limitations:

- Official road traffic accident data, particularly at the city level, such as Sialkot, was incomplete, inconsistent, or not digitized. This made it difficult to get a comprehensive picture of all accidents.
- Moreover, information recorded at the scene or in hospital records (e.g., exact cause, contributing factors) was subjective, based on eyewitness accounts, or lacked detailed technical investigation.
- The unavailability of resources was another limitation that cannot be underestimated.

Disclaimer: None

Conflict of Interest: None

Source of Funding: None

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ORIGINAL ARTICLE**Awareness of Burn Management among Undergraduate MBBS Students**

Mohammad Zubair

Affiliations Ex-DMS, Allama Iqbal Memorial Teaching Hospital, Sialkot Corresponding Author: Dr. Mohammad Zubair, Shahab Pura, Sialkot. Contact # 0334-8108954 zubairss436@gmail.com Submission complete: March, 2026 Review began: April, 2026 Review ended: May, 2026 Acceptance: June, 2026 Published: September, 2026 Author contribution: MZ: Designed the research Pattern and drafted the manuscript.	ABSTRACT Objective: To assess the awareness knowledge of burn management among undergraduate MBBS medical students. Methodology: A cross sectional study was conducted among 380 MBBS students ranging from 1st year to Final Year. A questionnaire was prepared and data was collected accordingly. Result: By evaluating the data collected it was found that 63.2 percent of undergraduate medical students were females and 37.8 were males. Out of the 380 participants 14.8% were from first year, 13.7% from second year, 25.9% from third year, 23.7% from fourth year and 21.9% from Final year. However, 58.7 students received formal training or lecture on burn management and 41.3% have not received any formal training or lecture on burn management. Majority of the students have managed burn injuries multiple times. Conclusion: This concludes that a few students have received formal training on burn management. Adequate knowledge and training on burn management plays a critical role in reducing complications and improving patients survival and recovery. Key words: Cite this Article as: Zubair M.; Awareness of Burn Management among Undergraduate MBBS Students. <i>SIAL J Med. Sci. Sept-2026 V-5 (Issue-1, Overall Issue-17)::33-37</i>
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Introduction

Burn injuries, resulting from thermal, chemical, electrical, radiation, or friction exposure, constitute a significant global public health burden. Thermal insults, specifically scalds and flame injuries are predominate etiologically ¹.

The economic ramifications are profound; a systematic review identified a mean health-care cost of US\$ 88,218 per patient, with substantial regional expenditures such as the US\$ 26 million spent annually in South Africa on kerosene cookstove incidents ¹.

Beyond direct medical expenditures, indirect costs, including lost productivity, long-term rehabilitative care for deformities, and psychosocial trauma, which compound the socioeconomic strain. Demographically, females experience slightly higher mortality rates globally, often correlated with open-fire cooking and unsafe domestic appliances that risk igniting loose clothing ¹.

Furthermore, pediatric populations are highly vulnerable, with burns ranking as the fifth leading cause of non-fatal childhood inju-

ries; notably, while poor supervision is a major risk factor, a critical subset of these injuries stems from child maltreatment ¹.

Non-fatal burns are a primary driver of long-term morbidity, frequently resulting in prolonged hospitalization, permanent disfigurement, and social stigmatization. The epidemiological burden is heavily concentrated in low and middle-income countries (LMICs). For instance, India records over 1 million moderate-to-severe burns annually, while Bangladesh reports nearly 173,000 pediatric cases ¹.

In nations such as Bangladesh, Colombia, Egypt, and Pakistan, approximately 17% of pediatric burn victims suffer temporary disabilities, and 18% sustain permanent impairments ¹.

In rural Nepal, burns constitute the second most prevalent injury type, accounting for 5% of all disabilities ¹.

High-income countries also face notable volumes; in 2008, the United States recorded over 410,000 burn injuries, with 40,000 requiring acute hospitalization ^{1,2}.

In Pakistan, the estimated annual incidence ranges from 105,000 to over 800,000 individuals, underscoring an expanding cohort of survivors navigating long-term disability. Clinically, burns are classified by depth of tissue penetration and Total Body Surface Area (TBSA), categorized from first to fourth degree ³.

Accurate depth classification is frequently obscured acutely, as burn wounds can dynamically progress over 24 to 48 hours ³. First-degree (superficial) burns are localized to the epidermis, presenting as erythema and pain without vesiculation (e.g., mild sunburn); long-term sequelae are rare, primarily limited to transient dyschromia ³.

Second-degree (partial-thickness) burns extend into the dermis, characterized by erythema, blistering, edema, and intense pain ³.

Third-degree (full-thickness) burns result in complete destruction of the epidermis and dermis, extending into the subcutaneous tissue, typically presenting with a white, leathery, or charred appearance ³.

Fourth-degree burns go through both layers of the skin and underlying tissue as well as deeper tissue, possibly involving muscle and bone. There is no feeling in the area since the nerve endings are destroyed. ³

Ethical Approval:

Before Initiating the study ethical approval was taken.

Objectives:

To assess the awareness knowledge of the burn management among under-graduate MBBS medical students.

Methodology

A cross sectional study was conducted among undergraduate medical students. Total 380 students ranging from 1st year to Final Year MBBS participated in this study.

Inclusion criteria:

Medical MBBS undergraduate students.

Exclusion criteria:

Post graduate medical students or students of other medical disciplines (not MBBS).

According to this criterion a brief questionnaire was prepared specifically for this study. It included demographic details,

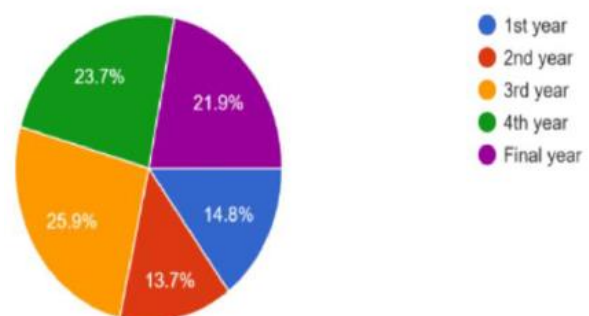
participants age, sex, year of study, knowledge of types of burns and management of different types of burns. The data was collected and details were noted on the questionnaire. On completion of study, the questionnaires were analyzed to obtain results.

Results

By evaluating the data collected it was found that 63.2 percent of undergraduate medical students were females and 37.8 were males. Out of the 380 participants, 14.8% were from first year, 13.7% from second year, 25.9% from third year, 23.7% from fourth year and 21.9% from Final year. However 58.7 students received formal training or lecture on burn management and 41.3% have not received any formal training or lecture on burn management. Most students have managed burn injuries multiple times.

All of the collected data was transferred to Microsoft Excel and their results were finalized by using graphs and pie charts.

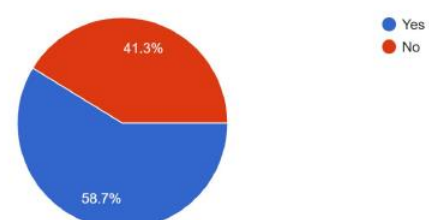
Year of Study?



Formal Training on burn management:

41.3% students did not receive any training on burn management while 58.7% received training on burn management

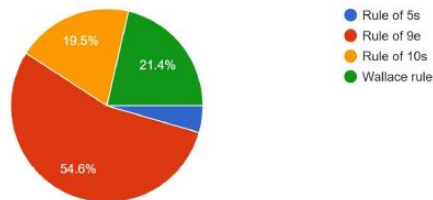
Have you received any formal training or lecture on burn management ?
378 responses



Wallace Rule of nine:

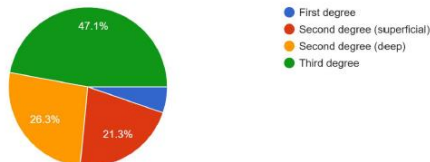
Awareness of Burn Management among Undergraduate MBBS Students

Which rule is commonly used to estimate percentage of body surface are burn
379 responses



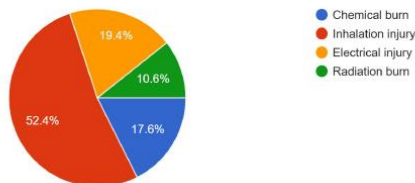
Degree of burn:

Which degree of burn is painless due to nerve destruction?
380 responses



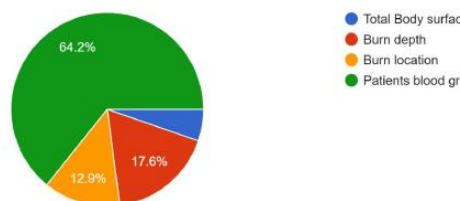
Types of Burns:

A patient with singed eyebrows and carbonaceous sputum is suspected of having
376 responses



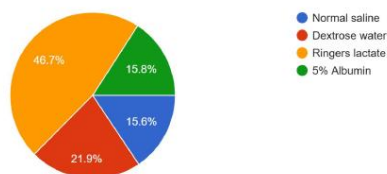
Severity of Burn assessment:

Which one of the following is not used to assess the severity of burn?
380 responses



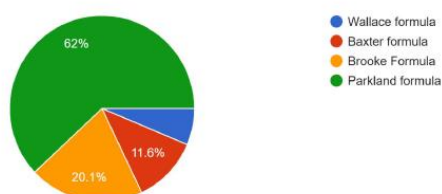
Fluid of choice for resuscitation:

What is the fluid of choice for resuscitation in burn patients?
379 responses



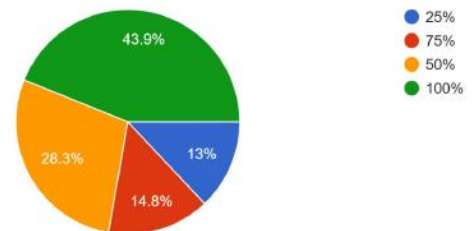
Formula used for fluid resuscitation in first 24 hours:

Which formula is commonly used for fluid resuscitation in the first 24 hours?
379 responses



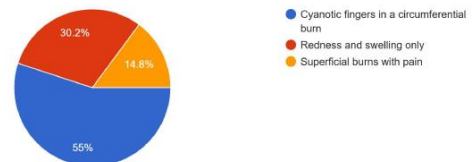
Parkland Formula:

In the Parkland formula how much fluid is given in the first 8 hours?
378 responses



Indication for escharotomy

Which of the following indicates the need for escharotomy?
378 responses



Discussion

In this study, undergraduate MBBS medical students were assessed about their knowledge of the clinical indication for escharotomy in burn management. The results demonstrated that 55% of students correctly identified that cyanotic fingers in a circumferential burn as the appropriate indication, while 30.2% incorrectly selected redness and swelling only, and 14.8% chose superficial burns with pain. Vetter et al conducted the same study and their results coincides with our figures. ⁴

The finding that just over half of the students answered correctly highlights a moderate level of awareness, but also reveals significant gaps in understanding. Escharotomy (emergency surgical procedure to treat deep circumferential burns) is a life and limb-saving procedure, typically indicated when a circumferential, full-thickness burn compromises distal circulation or ventilation (e.g., chest wall burns). Recognizing cyanosis or absent distal pulses is crucial, as delays in intervention may result in ischemia, necrosis, or even limb loss. The fact that nearly half of the respondents were unable to identify this clinical scenario reflects a potential deficiency in both theoretical knowledge and clinical preparedness. Mazeoetal described the same in their study. ⁵

The 30.2% of students who chose redness and the swelling may have confused the indications for escharotomy with general burn-associated inflammation, suggesting a lack of differentiation between superficial findings and signs of vascular compromise. Similarly, those who selected superficial burns with pain (14.8%) may have misunderstood the pathophysiology, as superficial burns do not lead to the compartment-like effects necessitating escharotomy.⁶

These results are consistent with previous literature indicating that medical students often lack adequate exposure to emergency burn management protocols. Since early recognition of escharotomy indications is critical in acute care, these knowledge gaps could translate into delayed or inappropriate patient care if not addressed.⁷

Overall, the data emphasize the need for improved teaching strategies in burn management, particularly focusing on emergency interventions such as escharotomy. Incorporating simulation-based learning, clinical case discussions, and hands-on workshops into the undergraduate curriculum may enhance both recognition and confidence in managing such critical scenarios.

Conclusion:

In conclusion, this study highlights the importance of strengthening undergraduate training in burn management, with emphasis on recognizing life-saving interventions such as escharotomy.

Recommendations; Public Health Prevention Strategies

To effectively mitigate the incidence and the severity of burn injuries, the comprehensive public health strategies must target systemic hazards through a multi-faceted approach:

- **Public Awareness Campaigns:** Enhance community education regarding domestic and occupational burn hazards.
- **Policy Development and Enforcement:** Formulate, implement, and strictly enforce legislative policies governing safety standards (e.g., building codes,

cook-stove regulations, and flame-retardant materials).

- **Epidemiological Surveillance:** Quantify the epidemiological burden and systematically identify population-specific risk factors.
- **Targeted Research Priorities:** Establish strategic research agendas focused on evaluating and promoting innovative, evidence-based interventions.
- **Prevention Program Implementation:** Launch community-specific burn prevention programs tailored to high-risk demographics.
- **Clinical Care Optimization:** Strengthen acute and long-term burn care infrastructure within health systems.
- **Capacity Building:** Expand institutional and systemic capacities to successfully execute and sustain these public health initiatives.

Clinical Guidelines for Acute Burn First Aid

1. Immediate Safety and Scene Assessment

- **Prioritize Responder Safety:** Personnel must not initiate first aid until scene safety is established. This includes neutralizing active hazards, such as disconnecting electrical currents or utilizing chemical-resistant personal protective equipment (PPE).
- **Cessation of the Thermal Insult:** Extinguish active flames utilizing techniques such as the "stop, drop, and roll" method, applying a fire-blanket, or using water/appropriate extinguishing agents. Subsequently, remove smoldering or contaminated clothing to halt the burning process.

2. Wound Management and Stabilization

- **Thermal Cool Down:** Irrigate the wound with cool, running water to dissipate residual heat and limit tissue damage.
- **Critical Precaution:** Avoid prolonged cryotherapy. Do not apply ice, as it induces vasoconstriction and deepens tissue necrosis. Limit the duration of water irrigation to prevent systemic hypothermia.

- **Chemical Decontamination:** For chemical exposures, immediately dilute and remove the agent by copiously irrigating the affected area with large volumes of water.
 - **Blister Management:** Maintain the integrity of blisters to preserve the sterile biological barrier; do not debride or puncture them until a healthcare provider can apply appropriate topical antimicrobials.
- 3. Contraindicated Materials and Infection Control**
- **Avoid Non-Sterile Applications:** Do not apply raw cotton, traditional remedies (e.g., *haldi*/turmeric), pastes, or oils to the wound. These substances introduce contaminants, exacerbate the risk of infection, and complicate subsequent clinical debridement.
 - **Restrict Premature Topical Medications:** Defer the application of topical therapeutic agents or ointments until the patient is formally evaluated within a clinical setting.
 - **Secure Dressing and Transport:** Cover the wound with a clean, non-adherent cloth or sheet to minimize environmental contamination, and immediately transport the patient to an appropriate medical facility for definitive care.

Disclaimer: None

Conflict of Interest: None

Source of Funding: None

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ORIGINAL ARTICLE**Complications of Pregnancy with Pre-Eclampsia: A Hospital-Based Study**

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Affiliations Consultant Gynae & Obs. Chattha Hospital, Sialkot Corresponding Author: Dr. Saima Chattha, Consultant Gynae & Obs. Chattha Hospital, Sialkot Contact No. 0321-6160278 saimachattha@gmail.com CNIC; 34603-4566544-2 Submission complete: Jan., 2026 Review began: Feb, 2026 Review ended; March, 2026 Acceptance: June, 2026 Published: Sept, 2026 Author contribution: SC; conceptualization of project, data collection, writing manuscript, statistical analysis, drafting, revision and final approval.	Abstract Objectives: To present a detailed analysis of the maternal and fetal complications connected to preeclampsia in admitted patients. Methodology: A cross-sectional study was conducted on 75 women identified as having pre-eclampsia according to the ISSHP 2021 criteria. The maternal morbidities (Eclampsia, HELLP Syndrome) and fetal prognosis i.e. (preterm labour and intrauterine growth restriction) are recorded during last 04 years in Chattha Hospital, Sialkot. Results: Of the studied pregnancies with pre-eclampsia, over half (53%) of the patients were between 20 and 30 years of age. The condition was most frequently diagnosed at a moderate to severe stage, with 50% of patients having a systolic blood pressure ranging from 140-159 mmHg and 46% having +2 proteinuria. A significant majority (71%) of cases were diagnosed at a later gestational age, between 30 to 34 weeks. Conclusion: Pre-eclampsia continues to be a significant issue for both mothers and babies. Keywords: Pre-eclampsia, Maternal mortality, Eclampsia, HELLP syndrome, Maternal morbidity, Perinatal outcomes. Cite this Article as: Chattha S.; <i>Complications of Pregnancy with Pre-Eclampsia: A Hospital-Based Study. SIAL J Med. Sci. Sept-2026 V-5 (Issue-1, Overall Issue-17):38-41</i>
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Introduction

Pre-eclampsia is classified as a complex, multisystem disorder clinically identified by the sudden onset of hypertension—defined as a systolic blood pressure, more than 140 mmHg and/or a diastolic blood pressure more than 90 mmHg occurring after 20 weeks of gestation in the previously normotensive women.¹

Historically, diagnosis strictly required the presence of proteinuria. However, revised guidelines from the American College of Obstetricians & Gynecologists (ACOG) have omitted proteinuria as an absolute diagnostic prerequisite. Despite these evolving diagnostic criteria, pre-eclampsia continues to be a leading driver of maternal morbidity and mortality worldwide.²

A significant proportion of pregnant individuals experience a progression of standard gestational symptoms during second and third trimesters. Yet the source of its troubles lie much further back in pregnancy.

This could be explained as a failure of the cytotrophoblast to adequately remodel the spiral arteries, meaning that the placenta is not being perfused well (leading to placental ischemia), which leads to fetal growth retardation. This causes severe and widespread endothelial injury due to factors produced as a response to the ischemic placenta, from the maternal side. Many of the signs and complications seen in preeclampsia are due to this kind of injury. Key complications include hypertension, proteinuria, renal and hepatic impairment, thrombocytopenia, and abdominal pain. Additionally, this spectrum includes HELLP syndrome, which is defined by the triad of hemolysis, elevated liver enzymes, and thrombocytopenia.³

Diagnosis, evaluation and treatment of the hypertensive disorders of pregnancy (HDP) are necessary.³

Current estimation of women suffering from this condition shows that it affects 3 to 9 percent of all pregnancies across the world.

A whopping number approximately 70000 women lost their lives due to this condition. These numbers have become even more alarming while looking into the developing countries.⁴

In Pakistan, pre-eclampsia rates jump to 10-16 percent of pregnancies - nearly double the global average. This drastic increase stems from multiple factors against mothers: inadequate prenatal care, limited health education, and higher rates of underlying health conditions.

Objectives:

To present a detailed analysis of the maternal and fetal complications connected to preeclampsia in admitted patients.

Methodology

Study Design and Setting: A cross-sectional study was conducted on 75 women identified as having pre-eclampsia according to the ISSHP 2021 criteria. The maternal morbidities (Eclampsia, HELLP Syndrome) and fetal prognosis i.e. (preterm labour and intrauterine growth restriction) are recorded in Chattha Hospital, Sialkot in the last 04 years.

75 patients diagnosed with pre-eclampsia were included after obtaining informed consent with the following:

Diagnosis criteria was:

- Systolic BP ≥ 140 mmHg diastolic BP ≥ 90 mmHg
- Proteinuria ≥ 300 mg/24 hours
- Onset after 20 weeks of gestation in previously normotensive women

Inclusion criteria:

- Singleton pregnancy
- Gestational age of ≥ 20 weeks

Exclusion criteria:

- Chronic hypertension
- Multiple pregnancies
- Renal or cardiovascular disease
- Refuse for consent giving

Statistical analyses were conducted utilizing IBM SPSS software. Variable characteristics were summarized using descriptive statistics, with findings illustrated through corresponding tables and pie charts. Statistical

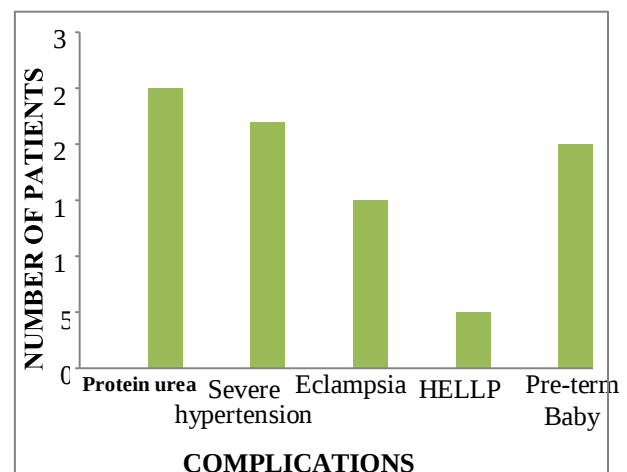
significance was established at a threshold of $p < 0.05$.

Results

Maternal Age Distribution of Pre-eclampsia

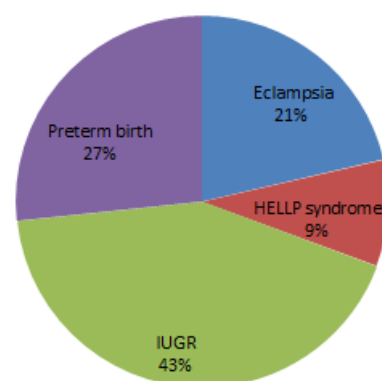
Age (years)	No of patients n=75	Percentage
<20	10	13%
20_30	40	53%
>30	25	33%

Simple Bar Chart of Pre-eclampsia Complications



HELLP (Hemolysis, Elevated Liver enzymes, and Low Platelets)

Complications Distribution



Discussion

Preeclampsia represents a severe gestational complication characterized by intricate molecular and cellular mechanisms that compromise both maternal and fetal well-being. Emerging evidence implicates fetal microchimerism in its underlying pathophysiology. Under the framework of the two-stage model, fetal microchimerism is conceptualized as a critical mechanistic link bridging initial placental dysfunction with subsequent maternal cardiovascular complications. Medical comorbidities are associated with fewer maternal complications, but worse neonatal outcomes.⁵

Liver involvement denotes severe preeclampsia or HELLP syndrome, both of which are associated with substantial perinatal morbidity and mortality. Long-term, cardiovascular disease emerges as a primary maternal threat, particularly among patients with early-onset presentations. This highlights a pressing need for postpartum health promotion interventions. At present, a critical knowledge gap persists regarding optimal protocols to prevent these chronic, long-term complications.⁶

Risk factors for the development of preeclampsia have been studied extensively. Major risk factors are a history of preeclampsia, chronic hypertension, pregestational diabetes mellitus, antiphospholipid syndrome, and obesity.⁶

Accessible health education and medical care, and awareness of prenatal control for all women will help in the primary recognition of severe pre-eclampsia.⁷

The high prevalence of pre-eclampsia in the community is alarming, significantly increasing the risk of adverse outcomes for infant health and well-being. There is a critical need to educate women about the signs and symptoms of pre-eclampsia.⁸

Concomitant supplementation with vitamin C and vitamin E does not prevent pre-eclampsia in women at risk, but does increase the rate of babies born with a low birth-weight. As such, use of these high-dose antioxidants is not justified in pregnancy.^{9,10}

Conclusion:

Although the relative risk of adverse events is more pronounced in preterm compared to term preeclampsia, the absolute burden of maternal adverse events is at least equivalent in term disease, which also accounts for a substantial proportion of total perinatal complications.

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