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Editorial

We are delighted to extend a warm welcome to all participants attending the International Conference 2024 on 18th – 19th November 2024. This conference provides a vital platform for researchers, students, academicians, and industry professionals from all over the world to share their latest research results and development activities in multidisciplinary fields. It offers delegates an opportunity to exchange new ideas and experiences, establish business or research relationships, and explore global collaborations.

The proceedings for International Conference 2024 contain the most up-to-date, comprehensive, and globally relevant knowledge across various disciplines. All submitted papers underwent rigorous peer-reviewing by 2-4 expert referees, and the papers included in these proceedings were selected for their quality and relevance to the conference. We are confident that these proceedings will not only provide readers with a broad overview of the latest research results but also serve as a valuable summary and reference for further studies.

We are grateful for the support of many universities and research institutes, whose contributions were vital to the success of this conference. We extend our sincerest gratitude and highest respect to the professors who played an important role in the review process, providing valuable feedback and suggestions to authors to improve their work. We also appreciate the efforts of the technical program committee, reviewers, and authors for their dedication.

Since September 2024, the Organizing Committee has received more than 55 manuscript papers, covering various aspects of multidisciplinary research. After review, approximately 19 papers were selected for inclusion in the proceedings of International Conference 2024.

We thank all participants for their significant contribution to the success of the conference. Our gratitude extends to the keynote speakers, individual speakers, technical program committee, reviewers, and the organizing committee for their efforts in making this conference a reality.

Acknowledgement

The International Conference 2024, was successfully held in 18th – 19th November 2024. We extend our heartfelt gratitude to our colleagues, staff, professors, reviewers, and members of the organizing committee for their unwavering support in making this conference a success.

We would also like to thank all the participants who traveled far and wide to attend this conference and those who attended the event virtually, making it a truly global event. This conference provided a platform for students, professionals, researchers, and scientists to share their latest research and developments in various disciplines.

The aim of the conference was to promote research and development activities and to encourage scientific information exchange between researchers, developers, professionals, students, and practitioners from all around the world. Once again, we thank everyone who contributed to making this conference a resounding success.

Dr. Simpson Rodricks
President
International Institute of Education, Research and Development (IIERD)

Contents:

Mastopexy With Dermal Fixation. Increased Stability of Results

M.A. Barsakov

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Abstract:

Introduction: In modern plastic surgery, there are a large number of breast lift techniques. Due to the spreading information about the "side effects" of silicone implants, interest in implant-free mastopexy is increasing year after year.

However, despite the variety of techniques, patients sometimes do not get full satisfaction from the results of mastopexy because of the unexpressed filling of the upper pole, extended anchoring postoperative scars and sometimes because of obtaining an aesthetically unattractive breast shape. The stability of the result after mastopexy depends on many factors, including postoperative rehabilitation. Stability of weight and hormonal background, stretchability of tissues.

The high recurrence rate of ptosis and short-term aesthetic effect of mastopexy indicate the urgency of improving surgical techniques and increasing the stabilization of breast tissue.

Purpose of the study: To develop and introduce into practice a mastopexy technique, which is based on the use of Dr. Hammond's modified SPAIR technique, as well as elements of tissue movement and fixation, designed to increase the stability of the postoperative result. In addition, give indications for the use of this surgical technique

Materials and Methods: According to the stated method, 126 patients aged from 23 to 51 years were operated on from 2016 to 2022. These were patients with primary mastopexy. Monitoring of patients to assess the stability of the result was carried out for 12 months.

Results and their discussion: Observing patients, we noted greater stability in breast shape and upper pole filling compared to generally accepted classical methods. We didn't have to resort to anchor scars. In 80% of cases, a T-shaped suture was used. In 20 percent there is a J-scar.

The quantitative distribution of complications identified among the operated patients is as follows:

- poor healing of the junction of vertical and horizontal sutures for a period of 1-1.5 months. after surgery - 18 patients; when treated with the ointment method, healing was observed in 7-20 days;
- permanent loss of sensitivity of the NAC – 2 patients (right);
- vascular disorders in the area of NAC/areolar necrosis - 0 (zero) patients;
- poor healing of vertical suture - 5 patients, conservative treatment ensured healing with minimal aesthetic defects;
- instability of shape in the postoperative period (6-12 months) – 7 patients (fat type of structure of the mammary gland, overstretched skin).
- in the late postoperative period, 5 patients became pregnant and gave birth; no problems with lactation were observed.

Conclusion: Thus, in the world of plastic surgery methods of breast lift continue to improve, which is especially relevant in modern times, due to the increased attention to this operation.

The method of mastopexy with dermal fixation proposed by the author makes it possible to obtain a stable result with certain initial parameters of ptosis, a fuller breast shape, to avoid the presence of extended anchor scars, and also preserves the possibility of lactation.

The author of this article has obtained a patent for invention for this method of mastopexy.

A Study of Factors Determining Sauna Travel Destinations

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Abstract:

Sauna use has been booming in Japan for several years and continues to do so. Consequently, many new sauna facilities are being built. Many sauna enthusiasts visit saunas near their homes or workplaces, and some even frequent them on a daily basis. Many sauna enthusiasts also travel to sauna facilities far away from home. Japan is not a large country. However, it is a long and narrow country, stretching approximately 3,000 km from east to west and north to south. Some sauna enthusiasts travel from one end of the country to another to use the saunas. This study focused on the determinants of sauna destinations. I will identify the factors that influence enthusiasts' decisions regarding sauna travel destinations. This point was discussed through an analysis of a questionnaire survey conducted by the author. The results showed that sauna facilities that have cold water baths, sauna facilities that they have always wanted to visit, and sauna facilities that they had visited before would like to visit again. These are the factors that sauna facilities should emphasize to be selected to the destination of sauna tourism.

Keywords:

Sauna tour, consumer behavior, cold water baths, sauna enthusiasts (sauna lovers)

Effect of Thermal Annealing Temperature on Tri-Layered AgO/AgTaO/TaO Nanocomposite Coatings grown by PVD Magnetron sputtering

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Abstract:

The increasing prevalence of nosocomial infections, particularly those associated with surgical sites, necessitates the development of advanced antimicrobial coatings for surgical tools and implants. This study focuses on the surface modification and characterization of a nanocomposite layer comprising AgO/AgTaO/TaO on SS 316 L stainless steel using Physical Vapor Deposition (PVD) magnetron sputtering. The AgO/AgTaO/TaO coating aims to enhance the physicochemical, mechanical, and biological performance of the substrates. The thin films were annealed at 450°C and 750°C to study the effects of temperature on their properties. Characterization techniques, including Field Emission Scanning Electron Microscopy (FESEM), Energy-Dispersive X-ray Spectrometry (EDX), Atomic Force Microscopy (AFM), and X-ray Diffraction (XRD), were employed to analyze the surface morphology, elemental composition, and crystallinity of the coatings. Results showed that annealing at 450°C produced a smooth surface with a roughness of 0.107 nm and initiated TaO crystallization, while annealing at 750°C led to silver segregation and increased surface roughness. These findings suggest that the annealing temperature critically affects the coating's properties, potentially impacting its effectiveness in preventing bacterial adhesion and biofilm formation. The study underscores the potential of AgO/AgTaO/TaO nanocomposite coatings in improving the safety and performance of surgical tools and implants.

Influence of Mass Media in Social Development of Bangladesh: A Theoretical Debate

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Abstract:

The influence of mass media on the social development of Bangladesh is profound and multifaceted, encompassing various dimensions such as education, political participation, cultural integration, and socio-economic progress. This study investigates how different forms of mass media—television, radio, newspapers, and digital platforms—contribute to these aspects of social development. Utilizing a comprehensive literature review and a structured questionnaire, the research explores the positive impacts of media, such as improved literacy rates, heightened political awareness, and the preservation of cultural heritage. Additionally, the study addresses the challenges posed by media bias, misinformation, and the digital divide. Findings suggest that while mass media significantly advances educational opportunities, political engagement, and cultural cohesion, its potential is often undermined by political affiliations and the spread of false information. The study concludes with recommendations for enhancing media literacy, ensuring unbiased reporting, and bridging the digital gap to foster a more equitable and informed society. Through this analysis, the research aims to provide a nuanced understanding of the dynamic role of mass media in the social development of Bangladesh.

Keywords:

Influence, Mass media, Social Development, Bangladesh.

SNP Discovery and Application in Genetic Studies of the Tasar Silkworm (Antheraea Mylitta)

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Abstract:

Tasar Silkworm, Antheraea mylitta is an economically important wild silkmoth species distributed across India. A number of morphologically and ethologically well-defined ecotypes are known for this species that differ in their primary food plant specificity. Most of these ecotypes do not interbreed in nature, but are able to produce offspring under captive conditions. In the present investigation the SNP discovery by alignment of sequences obtained from direct sequencing of genomic PCR products using WILDSILKBASE has identified potential EST-SSR marker to recognise single nucleotide polymorphism by comparing various tasar ecoraces, which was hitherto not reported so far. Single nucleotide polymorphism (SNP) analysis have been developed to distinguish the genetic diversity among silkworm species. A recent report has brought to light that lipo proteins are found to be synthesized in fat body and secreted to haemolymph, from which they are utilised during adult development, transported to yolk granules in adult female and yolk proteins of silkworm egg., B. mori (Pietrzyk et al., 2013). Since the 30-kDa family of lipoprotein from insect haemolymph has been the focus of a number of studies in the recent past, the present work has been focused on PCR-EST phylogenetic analysis of 5 ecoraces in Tasar silkworm, which has so far not been reported.

Keywords:

Tasar silkworm, Antheraea mylitta, Single nucleotide polymorphism, ecotypes.

Anti-Edematous and Anti-Lipid Peroxidation Properties of Methanolic Extracts of Urtica Pilulifera L.

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Abstract:

The plant species Urtica pilulifera is widely distributed in the Mediterranean basin and North Africa. It shows numerous beneficial pharmacological effects (anti-asthmatic, astringent, diuretic, hemostatic and anti-inflammatory). The present study is devoted to analyze the antioxidant and anti-inflammatory activities of methanolic extracts of fruits (F.E) and leaves (L.E) of Urtica pilulifera, by carrying out linoleic acid peroxidation and ear edema induced by croton oil tests that highlight the presence of antioxidant and anti-inflammatory substances, such as flavonoids and polyphenols. The obtained results showed that both extracts considerably inhibited the oxidation of linoleic acid with percentages of 77% and 74% for L.E and F.E respectively. Similarly, the local treatment of mice with 2mg/ear of L.E or F.E, inhibited ear inflammation induced by croton oil with 75% and 86% respectively. These values are better than those obtained with indomethacin (74%), used as reference. These findings showed that Urtica pilulifera extracts possess strong antioxidant and anti-inflammatory potential and represent an important source of bioactive compounds which support the traditional medicinal use of this plant. So, this plant might be exploited as a potential source of natural antioxidant and anti-inflammatory agents for pharmaceutical and food applications.

Keywords:

Antioxidant, Anti-inflammatory, Urtica pilulifera, Peroxidation, Edema.

Seroprevalence of Rubella Virus Infection Among Pregnant Women Attending Some Antenatal Clinics in Jigawa State

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Abstract:

Rubella, caused by the rubella virus, is an acute infectious disease posing a significant global public health challenge, particularly in developing nations where it annually results in 100,000 cases of congenital rubella syndrome (CRS). Despite its impact, there is limited data on rubella virus infection in the study area. This study aimed to assess the seroprevalence and molecular detection of the rubella virus among pregnant women attending some antenatal clinics in Jigawa State. The study, conducted as a cross-sectional, hospital-based analysis, involved 170 pregnant women. Socio-demographic information and risk factors were collected using a structured questionnaire. Blood samples were tested for Rubella virus IgG and IgM antibodies using enzyme-linked immunosorbent assay (ELISA). Data analysis was performed using SPSS version 20.0 for Windows. The study revealed an overall rubella IgM prevalence of 24.1% and a 94.7% prevalence of rubella IgG antibodies among the participants. The result of the study showed no statistical relationship between Rubella virus infection and socio-demographic parameters and risk factors. However, a relationship was observed between rubella virus infection and white blood cell (WBC) count, while no relationship was found with packed cell volume (PCV) and hemoglobin levels. The high prevalence of rubella virus among pregnant women underscores the importance of public awareness campaigns for prevention and control strategies to mitigate the disease's impact on morbidity and mortality.

Keywords:

Rubella virus, Seroprevalence, Pregnant women, Jigawa State.

DriveC: Web Application for Classification of Driving Events

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Abstract:

This paper presents a web application designed to analyze and classify driving behaviors using data from gyroscope and accelerometer sensors embedded in smartphones. By harnessing real-time sensor data, the tool accurately calculates driving risk, enabling continuous and comprehensive driver behavior assessment. An advanced Long Short-Term Memory neural network model was implemented, chosen for its superior capability to capture temporal dependencies in sequential data and effectively identify complex driving patterns. The model achieved a notable accuracy of 86.36 percent, underscoring its reliability and strong potential for real-time deployment. This innovative approach provides a practical and precise method for driving risk assessment, with significant implications for enhancing safety in the insurance industry and road management systems.

Keywords:

Driving rating, Insurance customization, LSTM.

Effect of Organic Fertilizer Mass on Medino GLP 190.L Beans (*Phaseolus Vulgaris L.)* Yield in the Western Highlands of Cameroon: Case of Neem (*Azadirachta Indica*) Leaf

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Abstract:

Introduction: Organic farming is an agricultural practice that involves the use of organic fertilizer for crops production.

Purpose: The general objective of this research was the use of Neem powder as an organic fertilizer to boast beans (Medino GLP 190.L) yield in the Western Highlands (North West and West Regions) of Cameroon. This research seeks to address the problems faced by farmers in the Western Highland of Cameroon. These ranges from grazing to high cost and extensieve use of inorganic fertilizer, leading to soil depletion and degradation.

Method: The assay layout was constituted of a simple block experiment with five different treatments involved, these included D0 (control: no fertilizer), D1 (58,625 kg/ha of Neem organic fertilizer), D2 (39,375 kg/ha of Neem organic fertilizer), D3 (26,250 kg/ha of Neem organic fertilizer), and D4 (13.13 kg/ha of Neem organic fertilizer). Each treatment measured 1.6 m2. Each treatment had a total number of 42 beans seeds holes that were incoporated with organic fertilizer as 200, 100, 150, and 50 g/hole respectively for D1, D2, D3 and D4. The rate of germination, Plant height and dried grains yield were the main parameters studied in this research.

Results: Results obtained showed that, the germination rate after nine days of beans seed sown in percentage (%) were 93.70, 59.50, 71.43, 94.05, and 97.61 % respectively for D0, D1, D2, D3 and D4. This revealed a negative coefficient correlation within fertilized treatments with fertilizer above D4 (2.1 kg). Results registered for Medino beans plant periodic height (P.h), measured every after nine (9) days for a period of thirty six days (36), in centimeter (cm) were 26.88, 21.50, 22.63, 25.91, and 29.83 repectively for D0, D1, D2, D3, and D4. There were significant difference between treatments plots (D4) with the best results. Results obtained in (tons). Beans yield, gave varying weights as follows 1.4×10^{-4} t, 5.23×10^{-5} t, 9.63×10^{-5} t, 1.01×10^{-4} t, and 2.16×10^{-4} t respectively for D0, D1, D2, D3, and D4. D4 showed a significant increase in yield as compare to D0.

Conclusion: It was concluded that, Neem organic fertilizer (powder Neem leaves) can improve beans yield and can be used as a growth stimulants in agroforestry hence combat food insecurity.

Keywords:

agroforestry, Azadirachta indica, food insecurity, grazing, inorganic and organic fertilizer and Phaseolus vulgaris L.

Machines and their Histories with Revolutions

Umesh kumar

Associate professor, mathematics

Abstract:

The paper presents ideas and developments about machines, their new forms and their histories with revolutions

A machine is a physical system that uses the power to apply forces and control movement to perform an action. The term is commonly applied to artificial devices.

Machines can be driven by animals and peoples by natural forces such as wind and water and by chemical, thermal or electrical power and include a system of mechanism that shape the actual input to achieve a specific application of output forces and movement. They can also include computers and sensors that monitor performance and plan movement often called mechanical systems.

Modern machines are complex systems that consists of structural elements mechanism and control components and include interfaces for convenient use.

Examples include a wide range of vehicles such as trains, automobiles, boats and airplanes appliances in the home and office including computers building air handling and water handling systems as well as farm machinary, machine tools.

In the 17th century the word machine could also means a scheme or plot a meaning new expressed by the derived machination.

History of Machines:

The hand axe made by chipping flint to form a wedge in the hands of a human transformation force and movement of the tool into a transverse spliting forces and movement of the workpiece. The hand axe is the first example of a wedge the oldest of the six classic simple machines from which most machine are based.

The other four simple machines have invented in the ancient near east. The wheel along with the wheel and axle mechanism was invented in mesopotamia during 5th millenium BC.

The earliest evidence of pulleys a date back to mesopotamia into the early 2nd millenium BC.

The screw the last of the simple machines to be invented first appear in Neo-Assyrian period (911-609) BC.

Greek philosophers defined the classic five simple machines and were able to roughly calculate their mechanical advantages.

The classic rules of sliding friction in machines were discovered by Leonardo-da-vinci(1452-1519).

The industrial revolution was a period from 1750 to 1850 where changes in agriculture, manufacturing, mining, transportation and technology had a profound effect on the social economic and cultural conditions of times.

Conclusions:

Machines, their some forms and their historical developments are presented in brief in the matter.

Keywords:

artificial devices, sensors, revolution, wheels, history of machines.

Frameworks for Circular Economy in Construction Projects-A Review

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Abstract:

The construction industry is considered as the world's largest raw material consumer in the world. Further, most of the construction is done on the principles of linear economy, where natural resources are designed, produced, used and finally become waste after service life. In the circular economy model, the existing materials and products are shared, leased, reused, repaired, refurbished and recycled. Thus, a circular economy addresses global challenges such as climate change, loss of biodiversity, waste and pollution. Researchers have suggested various Frameworks for using Circular Economy in Construction Projects. This paper is an attempt to review the various frameworks systematically, analyze them, finding the research gaps and suggesting the further scope of research.

Keywords:

Circular Economy, Framework, Construction, Projects.

International Conference–2024

Communicating Health Information About Physical Activity and Sedentary Behaviours to Small-Scale and Under-Resourced Communities

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Abstract:

Living a sedentary lifestyle has increasingly become dangerous in this era of non-communicable diseases and high mortality rate. While the people living in urban settlements are exposed to an array of sources of information on living a healthier and active life, remote rural settlements' only guaranteed source of information are the local nurses. This is notwithstanding the fact that the villagers' socio-cultural peculiarities and unfavourable economic background, make them a stark contrast of the local nurses. Given the problems that are most likely to occur when people from different socio-cultural backgrounds communicate, there was a speculation that the socio-cultural differences between the villagers and the local nurses could be an impediment to the successful dissemination of messages about physical activity and sedentary behaviours. This has prompted the question: What means of communication do the local nurses use to communicate messages about physical activity and sedentary behaviours? Driven by the concept of social constructionism, this study aimed to determine the right communication model for dissemination of information about physical activity and sedentary behaviours to remote rural communities. To gather information for this study, a participatory observation and semi-structured interview methods were used. The results have shown that an attempt to incorporate the cultural expressions and communication practices of the villagers into the communication of messages about physical activity and sedentary behaviours was made by the local nurses.

Keywords:

Communication, Physical Activity, Sedentary Behaviours, Socio-Cultural Background.

Conception and Preparation of an Antibacterial Gel Based on Essential Oils (Clove, Thyme and Sage)

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Abstract:

Essential oils are extracted from many aromatic and medicinal plants, and are volatile, natural, complex compounds with strong odors that are formed by aromatic plants as secondary metabolites. The bioactive properties of essential oils are often determined by the main compounds they contain, which are used as antibacterial agents. The three plants we used in our study were thyme, clove and sage, whose essential oils are known for their powerful antibacterial activity.

The main aim of this study was to formulate an antibacterial gel based on the essential oils of these three plants and evaluate its antibacterial activity against the bacterial strains collected: (ATCC bacterial strains: Escherichia coli, Staphylococcus aureus, Pseudomonas aeruginosa and Salmonella spp). Disk diffusion methods on solid agar media were used for sensitivity testing to essential oils and formulated gel.

According to the results obtained, the thyme and clove EOs tested showed a significant effects on all the strains tested, although five bacterial strains tested proved sensitive to our gel. The strongest activity was obtained against ATCC23 of staphylococcus aureus. Compared with the activity of ATBs, our formulated gel is proved as effective and had an antiseptic effect.

Keywords:

Essential oil, thyme, clove, sage, antibacterial gel, antibacterial activity.

Using Everything of Thoughts to Intelligently Generate Knowledge for Disaster Knowledge Management

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Abstract:

In the past few decades, climate change has led to rising temperatures, increased frequency and intensity of heavy rains or droughts, and increased people's water demand, causing serious damage to natural resources, personnel and property. These calamities caused tragic loss of life, severe property damage, and a decline in regional prosperity. There is a strong need to explicitly generate prior or existing problem-solving knowledge in a complex sustainable knowledge management.

The main purposes of this study are twofold. First, from the prompt engineering standpoint, it systemically investigated the disaster preparedness, using IDEF0, along with the "more manageable language" of the direction of decision-making by breaking down complex problems, the "thought" of disasters, using Large Language Model (LLMs). Given the IDEF0 expert model and Everything of Thought (XOT) model, finally, it integrated IDEF0and XOT for model setting and data analysis, in terms of My GPT, to ensure the accuracy and comprehensiveness of the disaster preparedness.

Keywords:

Everything of Thoughts (XoT), IDEF0S, Disaster Knowledge Management.

Critical Infrastructure Protection and Resilience Approximation of Training and Learning Paths in European Union Knowledge Hub

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Abstract:

In this multi-case study: the first case is addressed to gathering of cybersecurity skills and competencies as well as insights that the market needs for existing and future critical infrastructure workforce, conducted the analysis of cybersecurity programs, training, and study units in higher education. The first case is based in the general description of cybersecurity professional programs, current progress of security study modules, and designated steps that were needed to be taken for upgrading the security training, expertise studies, and higher education study units. The second case is addressed to the view of security training and studies of European Critical Infrastructure Protection and Resilience, establishment of on-line training and mentoring services, and generation of open study units and training in higher education. The contribution of this study is in security skills along with learning paths that leads to progress of these skills, development of competencies, and to progress of a learning management system that will be integrated with the European Union Knowledge Hub. The outcomes of study are presented and addressed to further cross-case analysis and approximation of training and learning paths as well as description of modular design of learning management system in the critical infrastructure domain.

Keywords:

security studies, security knowledge, critical infrastructure protection, critical infrastructure resilience.

"Age-Based Differences in Non-Syndromic Arteriopathy Patients: Prevalence, Associations, and Clinical Implications"

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Abstract:

Introduction: Aneurysms can develop as part of a syndrome, ranging from connective tissue disorders to familial/genetic conditions. However, the majority of aneurysms occur sporadically without an associated syndrome. Manifestations of these non-syndromic arteriopathies across various age groups have not been discussed extensively in the literature, especially in younger cohorts ≤ 60-years-old.

Purpose: We assess and compare the prevalence and outcomes of various non-syndromic aneurysms across age groups in patients ≤ 60-years-old.

Methods: A database of patients with aneurysms across any body site, ranging from thoracic and abdominal aorta to mesenteric and extremity aneurysms, was built. Patients with any associated vascular syndromes, including connective tissue disorders, were excluded. Patients were split into 5 age groups: 18-20, 21-25, 26-30, 31-35, 36-40, 41-45, 46-50, 51-55, and 56-60. Prevalence of arteriopathy across different age groups was analyzed using a two-sample proportion test. Outcomes, defined as revascularization, stroke, dissection, or death, were compared across cohorts using a chi-squared test.

Results: A total of 909 arteriopathy positive patients ≤ 60 years-old were included, with 291 males ($\bar{x}$ age= 49.99 ± 9.31) and 618 females ($\bar{x}$ age=47.49 ± 9.08). When comparing outcomes across age groups, dissection was rare in the youngest age groups <30 years old (p<0.05), with only 1 patient dissecting in the 18-25 age group. However, patients in age groups 31-35 (39.22%) and 36-40 (38.89%) were more likely to experience a dissection compared to 51-55 (24.10%, p<0.05 for both). Patients in the 41-45 group (47.20%) were also more likely to dissect compared to the 51-55 (24.10%) and 56-60 (34.69%) groups (p<0.05 for both). Patients in the 56-60 age group (34.69%) were more likely to dissect compared to the 51-55 (24.10%, p<0.05) group. From an intervention standpoint, patients in groups 41-45 (21.60%) and 46-50 (20.89%) were more likely to undergo revascularization compared to those in the 26-30 age group (3.23%, p<0.05 for both). There was no significant difference in stroke occurrence across groups, and death only occurred in patient ≥ 46

years-old. Interestingly, when comparing sexes across age groups, males had a higher prevalence of dissection in the 56-60 age group (43.14% vs 28.67%, p<0.05) compared to females.

Conclusion: Overall, it appears that dissection is more prevalent in younger patients with non-syndromic aneurysms, peaking in the 31-35 age range, reaching a trough at 51-55, and peaking again at 56-60. However, despite this early onset dissection occurrence, it appears that the peak revascularization rate occurred in later ages, 41-50, almost a decade after the peak dissection incidence. This calls for the need to spread awareness regarding the potential need for earlier vascular intervention in patients with non-syndromic aneurysms, especially those who might be at higher risk of dissection (e.g. males).

Unravelling the Unconscious: A Psychoanalytic Exploration of T. S. Eliot's The Waste Land

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Abstract:

T.S. Eliot's The Waste Land serves as a cathartic expression of his unconscious mind, inadvertently projecting his traumatic experiences through fragmented themes and kaleidoscopic imagery. This modernist masterpiece captures the collective disillusionment of a generation in the aftermath of World War I, conveying the devastating consequences of societal upheaval. Through a psychoanalytic lens, this paper explores how Eliot's candid depiction of post-war Europe turns out to be a revelation of his unconscious fears and anxieties. The poem's timeless themes – disillusionment, spiritual decay, and the search for meaning – transcend generations, resonating with contemporary audiences. The poem can be regarded as a paradigmatic work, addressing universal concerns that persist despite changing times. This analysis provides a framework for grasping the ongoing relevance of Eliot's work, demonstrating how The Waste Land continues to serve as a powerful reflection of humanity's struggles with identity, purpose, and the search for meaning in an uncertain world.

Keywords:

Eliot, The Waste Land, unconscious, fragmentation, psychoanalysis.

Evaluating the Influence of AI-Language Models on Scientific Research and Clinical Decision-Making: A ChatGPT Study on Squamous Cell Carcinoma

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Abstract:

Background: Large language models (LLMs) have the potential to transform scientific research and medical management. This study explored the role of three leading LLMs, ChatGPT, BARD and BingAI in identifying squamous cell carcinoma (SCC) in providing safe medical advice. SCC was used as a mere example of LLM efficacy in clinical decision-making for patient education.

Methods: A series of simulated clinical questions on SCC diagnosis and management were posed to ChatGPT, BARD, and Bing AI. The responses were analyzed qualitatively by a panel of doctors utilizing a Likert scale for comparative evaluation with existing literature and guidelines. Quantitative evaluation of readability was performed using three renowned algorithms: the Flesch Reading Ease Score, the Flesch-Kincaid Grade Level, and the Coleman-Liau Index. Information quality and relevance were assessed through the modified DISCERN score. A two-tailed t-test was performed for determination of statistical significance.

Results: Comparative analysis revealed similar reliability and readability in the medical advice offered by the three LLMs, with ChatGPT demonstrated superior performance with a DISCERN score of 72.0 (±4.00). BARD's responses were found to be the most readable, achieving a Flesch Reading Ease Score of 72.7 (±5.96), a Flesch-Kincaid Grade Level of 6.37 (±1.11), and a Coleman-Liau Index of 7.7 (±0.58). Notably, the only comparison deemed statistically significant with $p<0.05$ was between the readability of ChatGPT and BARD.

Conclusion: All three LLMs demonstrated the ability to provide reliable and comprehensible medical advice on SCC. ChatGPT marginally surpassed BARD and BingAI in delivering the most precise information, whereas BARD emerged as the most user-friendly LLM. This study highlights the potential of artificial intelligence-driven frameworks within the healthcare sector, particularly in the realm of dermatology.

Advancing Sustainable Energy in Saudi Arabia: Innovations, Implementations, and Future Prospects

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Abstract:

This paper examines the strategic implementation and effectiveness of supply chain and logistics services in Almarai Company, a leading food industry player with products characterized by short shelf life (5 days to 3 weeks). The study emphasizes the quantifiable benefits and operational returns achieved through optimized supply chain and logistics management. Given the perishable nature of their goods, Almarai relies on third-party logistics (3PL) providers to streamline operations, reduce costs, and enhance delivery efficiency. Selecting an appropriate 3PL partner is critical and demands expertise. This research utilizes the Analytic Hierarchy Process (AHP) as a robust decision-making tool to identify and prioritize the most suitable 3PL provider for Almarai's unique logistical requirements. The findings contribute valuable insights into the strategic integration of logistics services to enhance supply chain performance within perishable goods industries, offering practical implications for firms facing similar operational challenges. This study underscores the importance of effective logistics management in optimizing supply chain performance and overall business success.