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KEYNOTE SPEACH

Remember to Forget: the JVP Insurgency and Sanjeewa Pushpakumara's Burning Birds

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Postcolonial Sri Lanka has witnessed two militant movements; much attention has been paid to Tamil militancy, but scholars have paid significantly less attention to Sinhala militancy, which may be called Sri Lanka's forgotten war. While the first Southern insurgency of 1971 claimed at least 10,000 lives, over 60,000 Sinhala youth were killed from the mid-1980s through 1990 in the second Southern insurgency (also known as "the time of terror"); however, the ethnic conflict that lasted 25 years claimed 70,000 lives on both sides. It follows, then, that at least in terms of number of deaths, the two militant movements should be given equal importance, but this is not the case. Sanjeewa Pushpakumara's latest Sinhala film *Burning Birds* provides an occasion to revisit the Southern insurgency, which I argue, provides a crucial context to understand the state's failure to find a political solution to the ethnic conflict.

Except for two JVP-sponsored annual events (to mark the two Southern insurgencies) and a single monument in Seeduwa visited only by victims' families, there is no national memorial to the dead. Thus, the two Southern insurgencies that claimed the same number of lives as the civil war remain buried in the public consciousness and the predominantly Sinhala state has made no effort to rectify this lacuna.

Given this context of communal amnesia, I argue that *Burning Birds* functions as a mnemonic exercise that inaugurates a national conversation about state-sponsored violence that begins with intra-ethnic violence and yields crucial insights about inter-ethnic violence. I argue that until the Sinhala community remembers and learns from the Southern insurgency and the state's ruthless crackdown of their own community, they may never find a solution to the ethnic conflict, which is always already coded as "other" through labels such as "terrorist" and "separatist."

Climate Change and Adaptation in the Livestock Sector of Ethiopia

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Livestock play a significant role in Ethiopian economy and the adverse impact of climate change directly and indirectly affected the local people. Paper intends to identify and map the vulnerable areas of Ethiopia towards the climatic variations and at the same time it will also estimates the livestock sector affected from the same. Paper also reviews the adaptation measures in livestock sector of Ethiopia. The study is based upon primary and secondary data sources. For this paper both descriptive as well as explanatory research methods were used in order to describe the vulnerability of the livestock sector to climate variability and change, and to explain how they adapt and cope with the changing environment. Study shows that annual temperature has increased by 1.4o C and models also suggest that the average daily precipitation in Ethiopia quantity will lie around 1.97 mm in coming time that show the decrease the rainfall amount. Due to climate change induced hazards like recurring of drought leads the pastoralist's livestock's in to death and makes the pastoralist's to be more vulnerable. In Ethiopia, the farmer's as well as pastoralist's capacity to adapt to the changing climate is very limited due to lack of scientific knowledge, economic capacity and their dependency on natural resource. The majority of people adopted tree planting, water conservation and diversification of livelihood as a response to climate change.

Keywords: Climate Change, Livestock, Adaptation etc.

A multidisciplinary approach to stock market volatility: New evidence from the concept of entropy

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This paper focuses on the behaviour of stock market volatility, whose present complexity and uncertainty make this topic particularly relevant. We present an innovative approach based on the concept of entropy. Thus, the main aim of this paper is to examine the adequacy of entropy as a measure of uncertainty in assessing stock market volatility. Therefore, we compare this method with the traditional measure of volatility: the standard deviation. Although, as a measure of uncertainty and risk the standard deviation is quite popular since it is simple and easy to calculate it is not fully satisfactory in describing volatility. Additionally, entropy makes possible a more comprehensive analysis of volatility since it is a much more general measure than the standard deviation commonly understood as a measure of disorder, uncertainty, ignorance, dispersion or even lack of information. In particular, we use the Shannon and Tsallis entropies to quantify the volatility of the G7's major stock market indices. Therefore, our database comprises the daily returns of these indices and runs from January 2000 to March 2018. Our results show the limitations of the standard deviation-based approach in fully characterizing the oscillations of volatility and highlight the potentialities of entropy as a measure of volatility.

Keywords: Volatility; Finance, Entropy

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Determinants of Consumer Purchasing Intention of Organic Food in Urban Sri Lanka

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This study was conducted to identify the determinants of purchase intention of organic food by urban Sri Lankans. A field Survey was conducted in urban Sri Lanka covering six main cities; Colombo, Galle, Gampaha, Kandy, Kurunegala and Rathnapura including their suburbs, because these are the main cities of the country having all types of market places and also lots of urban consumers. Data collection was done from a sample of 600 consumers, from December 2016 to November 2017. Descriptive statistics and principal component analysis were used in data analysis. According to the results, majority of the respondents belonged to 18-40 years age category and married. From the respondents, 53 % were female. While most of the respondents (40.2%) had educated up to A/L, there were many graduates (36.2%). A significant number of respondents (42%) were earning monthly income more than 70,000 LKR. As per the principal component analysis, attributes of the organic products, product certification, health consciousness, market availability of the product, personal preferences of consumer were the extracted determinants. Thus, carrying out effective product awareness programs, exhibitions and advertisements campaigns, value addition for more organic products, establishing of better marketing system, encouraging the farmers for organic farming, expand the market conditions for farmers to sell their products, maintaining the really attributes (Smell, taste, quality) of the organic products are the timely important recommendations.

Keywords: Determinants, organic food, organic consumers, purchase intention, urban Sri Lanka,

Bilateral Agreements in Boosting Economy and Cooperation between Countries: A case study on ISFTA

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International cooperation is a vivacious stratagem for a state to progress in this anarchic world system to combat many issues arise within or afar a territory. The concept of cooperation started to spread out mainly after the post war era to establish world peace. Countries practice different dimensions in cooperation such as triangular, bilateral, multilateral, horizontal, decentralized, and common memberships of intergovernmental organizations.

The Indo Sri Lanka Free Trade Agreement (ISFTA) is a bilateral trade agreement which was entered into force with effect from March 2000, provides duty free concessions to a wide range of products traded between the two countries. Nearly two decades of its operation this has facilitated to develop cooperation and economy between two countries. Therefore, this research focuses on determining how successful the countries have been in developing cooperation and economy as a percentage of Gross Domestic Product (GDP). Further, this discussion aims to provide an idea on how bilateral agreements help in building cooperation between two countries apart from economies of those countries. A qualitative analysis of secondary data is the methodology used to conduct the research. This research is significant to the policymakers in constructing strategic decisions. As for the most part Bilateral agreements confer favoured trading status between two nations by permitting market access and increasing economic growth and cooperation.

Key words: Bilateral Agreements, Cooperation, Economy

Adoption of Data Mining Techniques to Enhance the Performance of a Library System

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The aim of this research was to present eligibility of applying data mining techniques to library data to enhance the library experience in universities. Library transaction data in University of Ruhuna were analyzed using association rule mining and clustering. Apriori algorithm was functioned to extract significant association rules with pre-defined minimum confidence and minimum support. Library users with similar behaviors were clustered using K-means clustering. A book recommendation system was implemented based on analyzed results, where the users can select books without visiting the library.

As per the results, students in faculties of Medicine and Engineering had borrowed more subject related books. Although seasonal patterns in borrowing books were identified in each faculty, borrowing books related to the subject areas was not satisfactory.

Results of the research can be used in acquisitions and other management decisions. Users can be facilitated by providing e-books related to popular categories as a solution for insufficient hard copies. Physical layout of arranging books can be re-arranged based on the results. As the book recommendation system was implemented using prior transaction behaviors, more relevant books can be easily selected and the awareness about the library collection can be enhanced. Even a student without any idea on which a book to borrow, will be facilitated to select relevant books efficiently. This research will be beneficial to researchers who are interested in Bibliomining.

Detecting Multicollinearity of Binary Logistic Regression Model

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One of the key problems arises in binary logistic regression model is that explanatory variables being considered for the logistic regression model are highly correlated among themselves. Multicollinearity can cause unstable estimates and inaccurate variances which affects confidence intervals and hypothesis tests. In this paper some diagnostic measurements are discussed to detect multicollinearity namely tolerance, Variance Inflation Factor (VIF), condition index and variance proportions. Motorcycle accident data are used to evaluate diagnostic measurements. Secondary data used from 2014 to 2016 in this study were acquired from the Traffic Police headquarters, Colombo in Sri Lanka. In this study, it is considered only the road accidents involved motorcyclists at fault. The response variable is accident severity which consists of two levels namely grievous and non-grievous. Explanatory variables were accident cause, time, road surface, weather condition, light condition and location. Multicollinearity is identified by correlation matrix, tolerance and VIF values and confirmed by condition index and variance proportions. The range of solutions are available for logistic regression such as increasing sample size, dropping one of the correlated variables, combining variables into an index, and testing hypothesis about sets of variables. It is safely concluded that without increasing sample size, to omit one of the correlated variables can reduce multicollinearity to a great extent.

Keywords – Logistic Regression, Multicollinearity, VIF

Evaluation of physical feed quality of fish feeds containing alternative plant protein sources

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Generally, fish feeds are stored in different storage conditions for longer periods, before use them for feeding fish in aquaculture farms. This study evaluates the effects of two storage conditions and storage time period on physical feed quality of diets for guppy juveniles. Four experimental diets (30% P; 5% L) were prepared and fish meal (FM) was main protein source of control diet. Sweet-potato leaf meal, jack seed meal and sesame seed cake meal were used as alternative protein sources to partially replace FM in other three diets. Experimental diets were stored in either room temperature or freezer for shelf-life analyses. Physical feed quality i.e. pellets diameter (mm), swelling %, water absorption index (WAI), bulk density (g L⁻¹), sinking rate (cm S⁻¹) were measured initially and at every 3 months (3m, 6m, 9m and 12m). Feed pellets stored in freezer showed better proximate compositions and feed qualities such as pellet diameter, pellet swelling %, WAI, bulk density and sinking rate compared to pellets stored in room temperature. Pellets qualities were decreased with increasing storage time period. Presence of plant proteins affected the physical feed quality of diets, however, all diets stored in freezer had better feed qualities compared to diets stored in temperature.

Keywords: Physical feed quality, storage time, storage condition

Controllability of Predator Prey Model

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Mathematical model has many welfares in life, especially the development of science and application to other fields. I try to accomplish here is, in some engineering problems with an unknown dynamic input signal is tracked by a known signal, that is if a system's output is known and say we need to find its input signal or related equation then we track the output signal with a known signal and try to make them coincide by controlling the systems equation (system dynamics).

In this research I try to control predator prey population model by changing the system. That is by changing the system of equation so that we get the desired system solution, and the other one is by changing its initial conditions within a range so that the system tracks the desired output with some conditions inclusive.

Since any control problem gives rise to costs due to material, labor, etc. By controlling such a predator- prey model with a desired signal we may predict the future behaviors of those systems and control the system in proper ways to get good prediction further.

Keywords: Lotka-volterra, Local and global stability, asymptotically stable

Parents' knowledge and practice regarding wearing spectacles among children with refractive errors; eye clinic at Lady Ridgeway Hospital in Colombo

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Introduction – Globally 123 million people have been affected refractive errors. Among them 19 million are children and 80% of them are visual learners.

Aim – To assess the parents' knowledge, practice, and factors regarding wearing spectacles among children with refractive errors

Methodology – Descriptive cross-sectional study was done among 350 of parents who have children with refractive errors age between 2-10 years and selected using convenience sampling method. Interviewer administrated pretested questionnaire used to obtain data.

Results – Majority were age between 5 - 7 years children with refractive error (42.9%) and 53.7% were female. 58% of parents' educational level was up to ordinary level. Majority 51.4% of parents did not know about available treatment method of refractive errors. 53.4% of parents had poor knowledge about refractive error. There were statistically significant associations between, parents' educational level with knowledge of the parents about wearing spectacles, knowledge about available treatment methods in refractive error and parents' knowledge on child's refractive error with parents' knowledge in type of refractive error (p-0.001).

Conclusion - There were associations between, Parents' educational levels with knowledge of the parents about wearing spectacles, parents' knowledge about treatment methods available for refractive error, and parent's knowledge in type of refractive error.

Key words: Refractive error, Knowledge, Practice

A systematic methodology to assess living conditions for spatial decision making

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At present, cities are subjected to severe migration pressure; therefore, the living conditions are varying from place to place. In light of that, immigrants are often concerned about their accessibility and amenities to various civil services. As a result of that, selecting a place to live has an impact on people mentally and also physically.

This study demonstrates the use of Geographical Information System (GIS) to implement a systematic methodology to evaluate living conditions in an effective manner. The evaluation included 6 basic civil services (Educational services, emergency services, shopping centres and community recreational parks) and crime data to interpret accessibility. Next; all service area maps aggregated to generate the final liveability map based the calculated weights.

Civic service accessibility maps were generated using ArcGIS's network analysis extension, while the final liveability map generated using weighted overlay analysis tool. Finally, liveability map classified into five benchmarks including best, good, acceptable, bad and worst.

Based on the final result, it is obvious that above methodology can be utilized to evaluate living conditions of different areas; In addition to that, this methodology allows stakeholders to identify design gaps in the city for further densification of civil services. Even though this study evaluates only a few most essential criterions, planners can make the evaluation more complex by adding additional criterions.

Key words: Multi-criteria analysis, Network analysis, Accessibility

Optimization of somatic embryo regeneration media for cotyledon explants of tea (*Camellia sinensis* L.) O. Kuntze)

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Somatic embryogenesis is an alternative method to resolve constrains in conventional crop improvement in tea (*Camellia sinensis* L. O. Kuntze). Hence, the present study was conducted with the objective of developing a viable somatic embryogenic protocol for tea. For induction of somatic embryos, two types of explants cotyledons (mature and immature) and somatic embryos of TRI2024 and TRI2043 cultivars were inoculated in MS media with different hormone combinations. Cotyledon in 2 mg/l BAP + 0.2 mg/l NAA MS media supplemented with two growth regulator combinations (2 mg/l BAP + 1 mg/l NAA and 3 mg/l BAP + 0.1 mg/l NAA) were tested for regeneration of somatic embryos derived from cotyledon explants. Somatic embryos were initially observed in mature cotyledons of TRI2024 in 2mg/l BAP + 0.2mg/l NAA. All growth stages as the globular, heart, torpedo and cotyledonary stages were obtained from somatic embryos and highest percentage (40%) of complete healthy plantlets were obtained from somatic embryos in 2 mg/l BAP + 0.2 mg/l NAA of TRI2024 while somatic embryoids were observed in 2 mg/l BAP + 3 mg/l NAA of TRI2043. MS medium with 3 mg/l BAP + 0.1 mg/l NAA was best for somatic embryo regeneration.

Keywords: Somatic embryogenesis, Somatic embryos, Leaf callus

Evaluation of Rice Genotypes for Brown Planthopper Resistance and utilization for Variety Improvement Program

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Brown planthopper (*Nilaparvata lugens*) is a major pest of rice, which causes significant yield losses annually in Sri Lanka. Host-plant resistance is an important strategy to manage Brown Planthopper (BPH) damage. Twenty-eight rice genotypes including New Improved Varieties, Introductions and traditional rice varieties were evaluated using standard seed box screening technique. During screening Ptb 33 used as resistant check, TN1 and Bg 380 used as susceptible checks. Among the genotypes screened majority of the varieties were found resistant to moderately resistant reactions. Bg 380 showed moderately susceptible reaction which recorded higher damage score (6.2). Bg 300, Bg 352, Bg 379-2, Bg 450, Bg 366 and Bw 367 which are popular varieties recorded moderately resistant reaction for both seasons. Two exotic lines, IR 65482-7-216-2 and IR 71033-121-15 showed moderately resistant reaction for the BPH. Among the Traditional rice cultivars Rathu heenati, Mudu kiri el, Horana ma wee and Hondarawala showed resistant to moderately resistant reactions which recorded low damage score (3.2). Ptb 33 had the highest level of BPH resistance with lowest damage score of 3.0. Though, its poor plant architecture and sensitivity to photo period, it would be required several seasons to combine its resistance with desirable agronomic traits. Combine use of phenotypic and genotypic evaluation method would be much important to utilize resistant genotypes for rice improvement programs for BPH management.

Keywords: Brown Planthopper, Resistance, Rice genotypes

China's influence in South Asia; dynamics and patterns of South Asian regional security complex. A study focused on small states in South Asia

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China and India proclaimed as regional great powers in Asia and emerging significant players in the contemporary international system. Since independent in 1947, India has been perceiving dominant power in South Asia, including the Indian Ocean. Despite the fact, that Indian neighbours regarded India as being in a dilemma to maintain its supremacy in the region since the Chinese footprint in South Asia. The Indian-led South Asian regional security order has become fragile and being challenged by the heavy presence of China in South Asia.

The research aims to answer the question of how China's increasing influence in South Asia has affected South Asian Regional Security Complex (SA-RSC) and what are the implications for smaller South Asian states. The research examines two main variables; increasing factors of China in South Asia and how South Asian small states (Bangladesh, Bhutan, Maldives, Nepal and Sri Lanka) adapt policies in balancing two great powers simultaneously.

The methodology of the research was primarily on secondary data analysis and "Regional Security Complex Theory" proposed by Buzan and Waever (2003) had been central of the study.

Keywords: South Asia, Regional Security Complex, Small states

General growth and local shrinkage in the Central Triangle of China: evidence and smart solutions

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By New Urbanization principle, urban agglomerations in China are expected to act as the engines for growth and innovation, with ever-increasing population and GDP. Yet, underlying this general growth phenomenon there are stories of urban shrinkage within urban agglomerations. Taking the urban agglomeration in the Central Triangle of China as the case, this paper finds that the central part of China has experienced population shrinkage while the west and the east regions have seen population expansion. This means that in the last 15 years the central part of China has in fact suffered from shrinkage in population. However, as the comparatively densely populated region in the middle part of China, the Central Triangle has sustained its population growth with most of the influx population concentrated in the three core metropolises, resulting in population shrinkage in the periphery cities. This finding indicates that the development of the Triangle of Central China now still features centralisation rather than dispersion. Different from this conclusion, if we go much closer and examine the three central metropolises, it shows a different development pattern. That is, the increase percentage of population in the very core districts of each metropolis is moderate and there are even some districts outside the core having slight population increase. It indicates the occurrence of the trickle-down effect within the boundary of the core metropolises.

Key words: urban agglomeration, local shrinkage, smart solution

Online Global Navigation Satellite System service portal to process data and download Continuously Operating Reference Station data

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Global Navigation Satellite System (GNSS) has been widely used in many disciplines. For most of the applications GNSS data should be post-processed to get an accurate positioning solution. Due to lack of user-friendly processing services and lack of knowledge on GNSS, users are facing difficulties to post-process GNSS data.

Although there are several GNSS data downloading options available, users have to spend time familiarising with the user interface to download data due to its complexity. The implemented system is capable of processing GNSS data in multiple processing modes. Users can upload observation files, navigation files and get the post-processed positioning file.

RTKLib post-processing application was used as the backend program to process GNSS data. Once user submitted the relevant information, python script calls command prompt to run a shell command to process GNSS data using RTKLib application. When processing completed in the backend, the final positioning file will be emailed to the user via google Simple mail transfer protocol service.

The system backend for the entire portal developed using Flask, a micro-framework for python. Data downloading section of service portal provides a user-friendly Interface to download data files in RINEX format from many worldwide GNSS stations effortlessly. Once the user submits the information, relevant ftp links are generated based on the user information in the backend. Finally, generated data links are emailed to the user.

Key words: Data processing, Data downloading, GNSS

Study on the Integrated Solid Waste Management for Sustainable Development in the Kalmunai Municipality

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Solid waste management becomes a key challenge faced by the entire world. Identify the problem in this research, solid waste disposals is a common threat to environment in Kalmunai Municipality since most of the solid waste great ended up directly in open landfill or dumps. In Kalmunai Municipality, there is approximately above 27 tons of wastes every day and of that, only 50 % are collected. The rest of 50% are just lying around the neighborhoods and nobody cares and this has resulted in the spreading of various chronic diseases. Municipality is struggling without having a proper land fill within the Municipal Council limit and it needs to travel about 30km away to dispose the collected municipal wastes and even though there are other measures like running recycling plant did not achieve the targets of their expectancy. In this context, this study seeks to assess the significance of the Integrated Solid Waste Management System for a Sustainable Development. Objectives of the research are to identify the factors affecting solid waste management, to determine the effectiveness of the solid waste management practices, to assessing the effect of each factor on solid waste management practices and to provide the suggestion for effective and efficient ways to improve the quality and effectiveness of the solid waste management. Hundred and fifty sample was selected through systematic random sampling method. Conceptual variables are stakeholders, aspects, elements and sustainable development. Data's are analyzed by descriptive analysis. Findings of the study show that all three variables are moderately supported to the sustainable development.

Key words: Solid waste Management, Sustainable development, System Awareness

E-Mini Market: Information Technology Based Support Tool for Small and Medium Scale Enterprises in Sri Lanka

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Small and medium enterprises (SMEs) play a crucial role in developing countries such as Sri Lanka in growth of an economy. Recently online platforms are being extensively used by SMEs for both marketing and selling items. In a context of keen competition among the online selling platforms, sellers are increasingly feeling the pressure for improving their sales and marketing strategies. When investigating existing problems of SMEs, we were able to find they do not have proper guidance to improve their own business. Simply, the SMEs cannot identify their own marketing level among the other competitors, they haven't any suitable guidelines to identify how they can improve their own market and they have to use manual reports to get their own sales details for visualizing their marketing level where they waste their valuable time and money for visualizing sales market outcomes. In consideration of this, we propose a web system, that examines the effects of three categories in this system, i.e. Seller trustworthiness, analyze customer's emotions, feelings, thoughts, and opinions through Social media (Facebook) and sales prediction component. This system facilitates a multiple seller platform, where they can dynamically manage virtual shop inside this platform. It increases their stability and it will provide directions to overcome economic and unemployment barriers in our country. The results support our research hypotheses partially. The findings of this study are expected to provide some suggestions for sellers on promote and improve of their sales.

Keywords—Sentiment Analysis, ROC-AUS Matrix, Small and Medium Scale Entrepreneurs (key words)

Understanding Menstruation through the Sanitation Infrastructure Value Chain

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There are over 357 million menstruating women and girls in India aged 13-49, but only about 48% of women actually know about menstruation at the time of menarche. Millions of women across India still face significant barriers to a comfortable and dignified experience with Menstrual Hygiene Management. Poor menstrual hygiene, and the use of unhygienic methods like sand, leaves, old rags on a continued basis carries adverse implications on the health, education and productive capacities of women and girls. Menstrual hygiene continues to be a challenging development issue in most developing countries, plagued with deep-rooted cultural beliefs, taboos and myths which perpetuate stigma, discrimination, and various forms of violence against women. In addition, a majority of women and girls in the global south, and especially in India, lack access to hygienic sanitary facilities and products necessary for good menstrual hygiene management.

While the Indian government and civil society players have been at the forefront in bringing out recommendations, schemes and policies that highlight the need for improved Menstrual Hygiene methods- there has been little effort to dilute the labyrinthine value chain issues within which Menstrual Hygiene Management resides. This means that it is not just Awareness and socio cultural myths/taboo around menstruation that impacts the current dismal scenario, but also Access (to hygiene products, types of product available, cost), Usage (hygienic know-how of product, incorrect information, sanitation infrastructure locally) and Menstrual Waste Management (mechanisms for safe disposal, urban and rural waste systems, problem of mounting volume of menstrual waste).

This sanitation infrastructure value chain of Awareness-Access-Usage-Waste Management is what this paper will attempt to unravel with the following questions in mind:

1. Have there been any policy mechanisms or larger political environments that have been in place to push a Value- Chain method of looking at Menstrual Hygiene Management?
2. How has individual civil society organizations worked in this highly specialized socio-political space?
3. What challenges currently exist hindering this Value-Chain being implemented in a holistic manner?

Keywords: Menstruation, Value Chain, Empowerment

Finding the optimal position to place an air conditioner using computational fluid dynamics

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With the extreme weather conditions that repeatedly occur worldwide, thermal comfort in living spaces has a significant importance. Sri Lanka being a tropical country, the temperature can rise up to 35 °C in the April and September equinox. With the rising temperatures, there is an increased usage of air conditioners in Sri Lanka. However, these air conditioners consume higher amount of power than the conventional electric fans. Therefore, to save energy it is important to find the optimal position to place an air conditioner in living spaces. Computational fluid dynamics (CFD) is an effective tool to analyze thermal comfort. Ten CFD experiments were conducted to assess the thermal comfort with regards to temperature and humidity. These experiments were carried out for April and September equinox in Sri Lanka. The used space consists of a wooden door and a set of glass windows. The orientation of the space was identical for all the experiments. Solar radiation, convection and conduction were considered in the computations. The findings of the experiment suggest positioning the air conditioner above the center of the glass window provides the optimum thermal comfort and thereby it is the most energy efficient location to position an air conditioner. The CFD computation results were validated through real-time temperature and humidity observations.

Keywords: Thermal comfort, Air conditioner placement, Computational fluid dynamics

Investigation on the Significance of Design Elements of Timber with Respect to Architectural and Structural Engineering Aspects: Review on Ambalam in Sri Lanka

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Integrated relationship along with timber among Architecture and Engineering runs back pre and post history with the combination of the nature with society. Timber is one of the oldest constructive materials utilized in Sri Lanka. Touching and feeling a piece of timber senses its warmth and the living surface. Design elements such as line, texture, shape, form, color together convey messages familiarizing the uniqueness of distinct characteristics. This study logically interprets Growth rings, knots colors, grain and textures as the design elements. Overtime timber fragrance and design elements change with the exposure to the climate. Sri Lanka is a country with an intermediate temperature and humidity along with sturdy sunshine all throughout the year that has been causing deteriorate of timber. Design to meet human requirement yet providing with a culturally deigned structure where design and structural engineering aspects integrate in a significant manner. Researching on completely expose open historical structure are living prove to investigate the design element and its endless changes consequently under the architectural and engineering perspective. Ambalam is one of the masterpieces of living architecture includes timber as the main constructive material more over that is exposed to the nature. These represent the refined vernacular architecture with advanced material manipulations. Comprehensive review will be conducted to identify the design elements of timber along with Ambalam Structures. Structural engineering aspects of timber with regard to the requirement set for material resistance performance and durability during the service life of the structure with the collaboration of design elements will be studied along.

Key Words – Design Elements Ambalam, Timber

Impact of Surface Qualities to Achieve Multifaceted Usability: Use of Textural Qualities for Ceramic Tableware Products

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Surface quality is one of the main elements that can establish first impression about the product in a human mind. The quality of texture is a main key feature under the umbrella of design element. Texture is a surface condition of the product and it perceived surface quality. It is one of the qualities that can be seen and felt. In ceramic pieces, two types of textures can be identified; Tactile texture and Perceptual texture. Textures might be divided into two categories, namely, tactile and visual textures. Tactile textures refer to the immediate tangible feel of a surface. Tactile object perception may therefore be defined as the perception of objects whose feature information is acquired via touch. Guy Nelinger et al. (2015), Touch has been described as the most fundamental means of contact with the world, and the simplest and most straightforward of all sensory systems. Skin is the largest organ of the human body and the fingers and lips are the most sensitive areas of the body. Tactile stimulation is vital in several domains, and the ceramic product has a closer relationship because most of the tableware ceramic products are handled by human hands. In ceramic production process texture is created as a result of Embossing and Engraving methods. Tableware are the dishes or dishware used for setting a table, serving food and dining. It includes cutlery, glassware, serving dishes and other useful items for practical as well as decorative purposes. Most of tableware products were created by applying their experiences and sociocultural requirements to cater functionality, and it can be manufactured out of variety of clay materials to accomplish maximum validity. Surface application techniques have become one of the elegant facts as well as supportive feature for product functionality and usability. Identified the parameters of textural surfaces accumulate to product functionality is the main obligation of this research. This research is based on the grounded theory method and Wedgewood branded designer tableware product categories; manufactured in Sri Lanka as well as an internationally are the main case studies in this research. According to the research findings of the selected existing product; texture can be identified as a main component of the entirety item. Textural surfaces are playing a main component in the product cycle to achieve high functional value. Such as qualities of; gripping, stability, staking, cooling and heat absorption and also add additional appearance are the veiled features behind the textural surfaces.

Keywords- Texture, Product functionality, Design features

Survival and Trivial of Information Accessing processes based on Artificial Intelligence.

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Artificial Intelligence (AI) is arguably one of the most exhilarating fields of technological development of our generation. Artificial Intelligence is closely influence on the fields such as Educational Techniques, Cybernetics. Nearly almost all the fields especially in the field of Information Technology relatively changed its real perspective of retrieving the information with the arrival of this Artificial Intelligence. This paper introduces computer aided instruction system and its Certainties, and discusses the conception, research objects and scope of AI, then deals with intelligent computer aided instruction based on the Artificial intelligence, finally proposed several kinds of Computer aided instruction.

Keywords: -Artificial intelligence, Cybernetics, computer aided instruction.

Movement of Slow-Fashion: Special reference to Dumbara weaving and Natural dyes in Early Ceylon.

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In contemporary fashion trends the slow-fashion or eco-fashion is most upcoming trend in all fashion aspects and this research study was identified the increasing awareness of eco fashion and sustainability through the ingredients and techniques the Ceylonese have been used. Sri Lanka was known as Ceylon in ancient time and was rich with craftsmanship. The handloom weaving was foremost among all the craftsmanship techniques that Ceylonese had renowned. Dumbara weaving is one of the most identical weaving techniques, originated in Sri Lanka and used natural dyes to colour the yarn. Later it had been used to accomplish print on textiles. The natural dyes were vastly used in ancient Ceylon due to the availability of the ingredients. This study was persuaded to grasp the sense of aesthetic and cultural values of ancient craft techniques and ingredients, which could be used as forthcoming fashion trend.

Keywords: Dumbara weaving, Natural dyes, Slow-fashion

Analyzing Data with R Programming Language to Diagnosing Breast Cancer

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Breast cancer is the primary cancer category among the woman all over the world. The main reason for this is the lack of ability in detecting the symptoms. There is generally two sort of breast cancer as invasive and non-invasive. The aim of this study is to analyze the data which is related to breast cancer using the R package. This paper focuses 569 examples of cancer biopsies, each with 32 features. The diagnosis is coded as "M" to indicate malignant (cancerous) or "B" to indicate benign (not cancerous). 30 of them among 32 features are numeric-valued laboratory measurements. All 30 numerical values are explicit by using ten main characteristics as Radius, Texture, Perimeter, Area, Compactness, Smoothness, Concavity, Concave points, Symmetry, and Fractal dimension. This experiment used R-multiple regression and decision tree algorithms for this clarification. R is the primary and popular data analyzing tool among data analyst for analyzing their great dynamic and unstructured data sets. Here used 'lm (),' 'rpath,' 'ctree' and evaluate an equation for the regression model. R multiple regression uses more than one predictor variable which is defined above and one response variable, and the decision tree is used to represent the result as diagnose malignant or benign graphically. Based on the experimental results, it recommends the training a model of data and evaluates the model performance.

Keywords: Breast Cancer, R language, R-Regression

Organic Product Certification in Sri Lanka with Special Reference to Ratnapura and Badulla districts

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Identification of real organic products is a serious problem in some countries including Sri Lanka due to lack of proper organic product certification systems. The main aim of this study was to investigate the present situation of organic certification systems in selected two districts in the country; Ratnapura and Badulla where there is high potential for organic agriculture. Initially literature review was conducted to find out the present situation of organic product certification in the country. Then, a field survey was conducted using 300 randomly selected farmers from 2017 to 2018. Some descriptive Statistics were used for the data analysis. According to the findings of literature review, currently there are seven international certification agencies operating in the country. However, four certification bodies are functioning for local marketing. As per the finding of the field survey, Sricert is the only certification system used in the both districts. Very few farmers are doing certification. However, most of the farmers (55.3%) were willing to shift to organic agriculture and certification. But challenges such as doubt about reduction in harvest and income from farming, lack of market opportunities, low level of awareness of the certification process, high cost and complexity of certification process are acting as barriers. Therefore, formation of user-friendly certification procedures, awareness programs for the potential famers and marketing facilities for certified organic products will motivate farmers towards this endeavour.

Keywords: Organic agriculture, certifications, organic produces, Sri Lanka

A study on the Impact of Service Quality on Customer Satisfaction in Bakery Café Industry

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The study examines the existence of a relationship between service quality and customer satisfaction in the bakery café industry within the city of Colombo. Due to the rapid increase in the density of the customers and, changes in demography and lifestyle, customers have turned out to be increasingly demanding in the case of customer service. Poor levels of customer service destroy the customer's loyalty which is an essential element in attracting repeat customers in the fast food and restaurant sector. Previous studies suggest the Service Quality dimensions of Tangibility, Reliability, Assurance, Empathy, Responsiveness and Price would create customer satisfaction.

Data were gathered covering six leading bakery cafés located within the city of Colombo and the collected number of responses was 214. The findings of the study revealed that among the six quality dimensions (independent variables) only four dimensions (Empathy, Assurance, Reliability, and Responsiveness) have shown a significant positive relationship with customer satisfaction. The accuracy level of the fitted Regression Model is nearly 61%. Further, it was identified that Sri Lankans ('Nationality') and unmarried customers ('Marital Status') create a significant moderating impact on the relationship between service quality and customer satisfaction.

Key Words: Customer Satisfaction, DINESERVE model, Service Quality

Storytelling with Dialogical Methodology Based on Philosophy for Children

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Storytelling with dialogical methodology based on the Philosophy for Children program by Matthew Lipman is a didactic strategy that proposes the use of a story to involve the emotions of the viewer with the search for knowledge and above all with reflection to contribute to the development of critical thinking. Through novels previously made by the professors that propose this project, topics included in the syllabus will be addressed. These themes are presented mixed in a plot that aims to involve and interest students to discover the knowledge involved in it. The passages of the novel will serve to direct the class sessions and trigger the dialogue between the students and the teacher. They will also serve as a trigger for activities. This is intended to promote curiosity and enthusiasm in students for the content of the subject.

The Mystery of Phi Code for the subject of "Spanish language, art and culture" and "Liberalism and expansion in industrial society" was written in order to cover topics such as parts of speech, sentence types and elements of art. As proposed by Sumiacher, inside the classroom (community of dialogue) students read a passage of the novel and the teacher asks each person to write a question about what has been seen in this chapter that has caught their attention. From this question the dialogue begins.

Palabras Clave: Storytelling, Philosophy for children, dialogical methodology

Light in the Midst of Darkness: Lived Experiences of Cancer Warriors

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Cancer is one of the top 10 causes of mortality in the Philippines and also in the United States. Cancer had a great impact in the patient's role within the family, community and the society. The patient's coping depends on what they believe in and their support groups in the course of this disease. The researcher had embarked to explore the lived experiences of pediatric patients with cancer because there was limited literature and studies in a specific population, this motivated the researcher to dig deeper on how the pediatric patient go through the process and what will be their motivation to continue their life. Employing a phenomenological approach about the lived experiences of cancer warriors, this delved into the perceptions of pediatric patients towards cancer, coping mechanisms, changes they experienced and their motivations that served as their strengths for continuing their treatment. Informed consent had been formulated for the parents and also the children. The researcher had been prudent and transparent to the informants regarding these ethical considerations. Purposive sampling had been applied in this research. Eight informants were interviewed using the interview guide that was validated and pilot tested. Participants of the study were interviewed in different settings, such as Batangas Regional Hospital and the Clinic for the Sick Child, that cater to hematologic and oncologic pediatric cases.

The results were as follows: in the perception towards cancer: fear of death, for the feelings towards cancer is sense of depression and pain, for changes in the family and society, sense of dynamic dependency and tolerance. Life Changes were as follows physiologic changes, Sense of social and self esteem deprivation, sense of educational deprivation, sense of protective isolation. For the motivation of the in formats the theme was as follows, deceiving acceptance and holding onto the light of faith. It was concluded that informant's perception towards cancer was terminal and leads to death. Changes had encounter in Cancer process was not only in physical disability, but it encompasses role changes as a son/daughter, a student and a member of the community. Their motivation was rooted to their faith and hope for return to a normal life. Recommendation of this study was to have a specialized education, training, and skills for palliative and oncologic pediatric patients. The care should be sensitive enough with the faith and belief of one's child and in collaboration with his /her family regardless of its outcome.

Key Words: Phenomenology, Cancer, Motivation, Faith, Adaptation

Antimicrobial Activity of Visible Light Activated TiO₂ Photocatalytic Nanoparticles upon Incorporation in Denture Base Resin

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Crylic dentures are generally used as alternatives for natural teeth for rehabilitating lost oral functions. Plaque is a mass of bacteria protected by a biofilm and it adheres to dentures with a wider adhesion area than the natural teeth. These changes with denture wearing increase the oral microbial load.

In addition, the routine use of denture cleansers may be unaffordable prohibitive in cost especially in elderly and handicapped denture wearers. Therefore, photocatalytic, chemically stable and biocompatible TiO₂ was incorporated in denture base resin and was tested for its antimicrobial activity – in vitro and in vivo. As commercially available TiO₂ is UV activated and has electron holes, visible light activated TiO₂ was synthesized indigenously in this research using TiN as precursor. XRD, FTIR, SEM and EDAX studies of this TiO₂ were carried out. This was incorporated and also coated on acrylic specimen at two different concentrations. In vivo followed positive in-vitro antimicrobial activity of this material. The patients were recalled at various time intervals and antimicrobial activity was assessed. The results obtained showed a decrease in microbial load when visible light activated TiO₂ was incorporated in denture base resin.

Revisiting the definition of children: Contextualizing Bangladesh

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To be very brief, this paper examined the definition of a child from a global perspective, then from Bangladesh perspective. This paper underscored the biological and social definitions, structure and the changing definition of a child, identifies cabinet approves National Child Policy, its challenges, Bangladesh government's new National Child Policy and suggests some policy measures to improve this huge disparity and finally a success story in tackling child under-nutrition. For fulfilling these objectives, I have collected a few books related to the area of my interest from various sources including the archive of Daily Star, some articles and journal from online resource center and so on. For the purpose of convenience and better report, the findings from the sites visited have been clustered data analysis. The major limitation I have found was there's not a concrete definition for identifying children. It was found that with the ultimate goal of creating a sustainable system, it could be helping and then teaching children to do the same. The authority, as well as the Government of Bangladesh, should come forward with a strategic plan to address the issue of the street children.

Key Words: Children, National Child Policy, Sustainable System

Quantifying role of seed contamination as a source of weedy rice infestation and spread in Sri Lanka: A case study in Eastern, Northern, North-Central and Southern Provinces

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Weedy rice problem is a severe issue in rice growing districts such as Jaffna, Ampara and Matara in Sri Lanka. A survey study was conducted along with the seed paddy sample analysis during maha 2016/2017 and yala 2017 in order to quantify the role of seed contamination as a source of weedy rice infestation and spread. Twenty-six (26) farmers representing Northern Province, 22 farmers representing southern province, 18 farmers representing North-central province and 25 farmers representing Eastern province were selected for the study. 500g of seed paddy samples were collected from the same seed lot farmers using for sowing their crop. A structured questionnaire with basic information of farmers and their crop management practices were filled from each farmer when collecting seed paddy samples. Seed samples were processed in the laboratory and weedy rice seed contamination were quantified. Results revealed that seed paddy of selected paddy farmers had contaminated 19-73% during the season studied. In another words farmers are seeding 46,000 to 60,000 seeds of weedy rice per hectare. It is clear that seed paddy is one of the main sources of weedy rice infestation and spread in studied area.

Keywords: Seed paddy, weedy rice, seed paddy, seed contamination

A study to evaluate effect of different surface treatment on osteoblastic activity of zirconia implant material - An invitro study

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The success of endosseous implants is directly related to the principle of osseointegration. As the surface topography of a biomaterial has a major impact on osseointegration. The aim of this study is to investigate the effect of different surface treatment on the osteoblastic activity of zirconia.

Materials & Methods: A total of 60 samples of Zirconia discs was fabricated and divided into three groups.

Group 1[n-20]: Zirconia without treatment

Group 2 [n-20]: Zirconia treatment with sand blasting / acid etching

Group 3 [n-20]: Zirconia treatment with UV light

After the surface treatment all the three groups was subjected to SEM scanning electron microscope to determine the surface roughness and topography. Human osteoblastic sarcoma cells will be seeded on the test material at density of 1×10^4 cells / cm^2 and incubated for 48 hrs at $37 \pm 10^\circ\text{C}$ under humidified atmosphere containing 5% CO_2 . After 48 hrs cell seeded test material and glass cover slips was fixed with 2.5% glutaraldehyde. SEM was done to evaluate adhesion of osteoblastic cells and colony formation on the zirconia discs and compared between groups.

Results: There was marked osteoblast adhesion seen in the zirconia discs treated with UV light followed by etching and sand blasting, as compared to zirconia discs without surface treatment.

Key words: Zirconia implant, surface treatment, osteoblastic activity.

A novel greener approach to enhance the photocatalytic activity of Titania nanoparticles using table sugar derived carbon quantum dots

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Present research focuses on the use of table sugar derived carbon quantum dots for photocatalytic activity enhancement of Titania nanoparticles. Synthesis of carbon dots was achieved via a green route in which a sucrose solution was first heated at 180 °C for 4 hours under atmospheric pressure. The Titania nanoparticles that prepared by sol-gel method were added to a carbon dot containing ethanol solution and mixed thoroughly under sonication to attach the carbon dots to the Titania surface, which was then dried to obtain the composite material. The photocatalytic activities of both pure titanium dioxide and the composite material were evaluated against the degradation of methylene blue dye. Scanning Electron Microscopy (SEM) images confirmed the formation of the nanocomposite and according to the UV visible spectral analysis, the composite material showed high degradation efficiency compared to the bare Titania nanoparticles. Furthermore, the carbon dots exhibited high absorption and photoluminescence at 280 nm and 480 nm respectively and they showed good solubility in water. The Fourier-transformed infrared (FTIR) spectroscopy analysis revealed the presence of hydroxyl and carbonyl groups in the synthesized carbon dots, which explains its excellent solubility in water.

Keywords: Titania, carbon quantum dots, photocatalytic activity, photoluminescence

The Impact of Service Quality Dimensions on Patient Satisfaction: With Reference to Private Health Care Sector in Western Province, Sri Lanka

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The aim of this study is to examine the impact of Service Quality dimensions on Patient Satisfaction in Private hospitals situated in Western Province, Sri Lanka. When considering about Sri Lankan healthcare sector, it is evident that private sector participation in health care service delivery continued to expand during the past period and plays a critical role in providing healthcare services in Sri Lanka. Patient satisfaction is considered as a significant aspect of the quality of a healthcare service and also it signifies their achievement in healthcare. On the other hand, customers expect higher service quality from the healthcare service providers. Thus, this study attempts to identify most significant Service Quality dimension that has an impact on the patient satisfaction as the main objective of this study. In addition, this study evaluates whether the criticality of illness moderates the relationship between patient satisfaction and Service Quality. The variables operationalized to measure the Service Quality in this study are based on HSCQ dimensions and include: Doctors' care, Nurses' care, Physical maintenance, Operational activities and Supportive staff. A self-administered questionnaire was used for data collection and Multiple Regression Analysis that utilizes data from 150 inward patients in leading Private hospitals in western province was conducted and revealed that among the five Service Quality dimensions only three dimensions (Nurses' care, Physical maintenance and Supportive staff) have shown a significant positive relationship with customer satisfaction.

Key Words: Patient Satisfaction, Service Quality dimensions, Private Hospitals

Analytical Study Related to Impact of Land Cover Changes for Urban Sprawling in Sub Urbans: Special Reference to Kadawatha, Sri Lanka

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This paper examined suburban land cover changes in Kadawatha Sub Urban (KSU) area and its effect to the urban sprawl of the area. The main objective of this study was to identify the land cover changing pattern of KSU. The specific objective was to explain the impact of land cover changes for urban sprawling.

Spatial analysis techniques were applied to land use digital data of 1989 and 2016. It was explored there were more green patches was in 1989 (1147.01ha) compared to the land cover in 2016 (424.6 ha). The analysis revealed that the land cover converted into built uplands due to the urbanization and commercialization by 2016. Kadawatha town developed due to the textile sector and the shops that emerged either side of the road function as a catalyst in the town. The enhancement of the accessibility to the textile sector is strengthened by the Colombo – Kandy main road. This catalyst and the location of Kadawatha function as pull factors for business and the residential community. Kadawatha is a prime location for settlements because it is located 16 km away from the Capital. The provisions of infrastructure in terms of the highway were able to strengthen the catalyst because it influenced the development of the town along the Colombo – Kandy main road. All these scenarios caused urban sprawling in KSU.

Key words – Kadawatha, Land cover, Urban Sprawling

The Importance of Management Tools for Enterprises' Participation in Supply Chains

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The main purpose of this paper is empirical examination of the correlations between enterprises' participation in supply chains and utilization of management tools in enterprises. The paper reports the results of a survey study with a sample of 198 employees from Slovenian logistic organizations. First, we outlined how employees assessed utilization of management tools, and participation in supply chains in their organizations. We continued with hierarchical regression for testing the associations between enterprises operating in supply chain and enterprises' management tools usage, while the impact was controlled with selected personal and organizational control variables. Results show that loyalty management, core competences, and scenario and contingency planning are most strongly associated with the supply chain management's activities in considered organizations. The most exposed management tools in previous studies of supply chains – like outsourcing, lean production and total quality management, are currently not considered as important tools for supporting enterprises' participation in supply chains in considered sample. This result denotes that the surveyed managers understand management tools mainly as solution for optimization of enterprises' participation in broader supply chains and less as possible solution for functional optimization oriented on focal participation in supply chains. The results from this study suggest rethinking the current focus of management tools utilization, when organizations try to improve their participation in supply chain.

Keywords: Management Tools, Organization, Supply Chain Management

Caregiver Abuse Experienced by Patients with Bipolar Disorder

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This study aimed to examine the emotional abuse of patients with bipolar disorder by their spouses, acting as primary caregivers. Sixty patients of bipolar disorder (M=47.40 years, SD=9.90), currently in clinical remission along with their spouses were recruited for the study. Inclusion criteria for caregivers included no physical and mental health morbidity. The caregivers were evaluated on the Family Interview Schedule (FIS), Perceived Criticism Measure (PCM), and Caregiver Abuse Screening (CASE) questionnaires. Majority (90%) of the caregivers scored above the cut off score on the FIS suggesting that they were experiencing high level of caregiving burden, with the highest scores found on the domain of disruption of the family routine (M=6.83;SD=2.23) followed by the financial burden domain (M=5.03; SD=2.57). Caregivers were found to score significantly more than the patients on PCM ($t=2.26$, $P < .05$). Scores on the CASE questionnaire revealed that a little more than three-fourth (76.7%) of the spouses reported having trouble in controlling their anger; more than half of the caregivers (56.7%) felt that they were forced to act out of their character and it was difficult to manage patient's behaviour, leading to abuse. The results indicate that caregiver burden, distress, and expressed negative emotion often lead to the abuse of patients. There is an urgent need to also address the distress of spouses/caregivers of patients with bipolar disorder and plan psycho social intervention in the comprehensive management of patients with bipolar disorders.

Keywords: Bipolar disorder, spouse, caregiver abuse

Environmental Risks and Child Development: Case of India

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Research indicates that early life experiences and environments in which children grow up in shape children's early brain and cognitive development and this has long term impact on whether they grow up to be healthy and productive members of the society. Children in India, and in other developing countries, are exposed to multiple risk factors including economic disadvantage, poor cognitive and language stimulation, neglectful home environments, poor school readiness and this negatively impact their social-emotional, cognitive, language and motor development. Although recent evidence suggests that poverty is declining in India, children from poor homes continue to suffer the disadvantages of poor development. The failure of children to fulfill their developmental potential and achieve satisfactory education plays an important part in the intergenerational transmission of poverty. The presentation will focus on social environments of disadvantaged children and highlight their role in early child development in India and other developing countries.

Enhancing Research Skills through initiating the “Research Commons” in Sri Lanka: Concept being introduced at University of Moratuwa Library

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Enhancing research and knowledge are the first and foremost goals of a University. The academic library is responsible to provide new library facilities and, extend the fullest support for researchers to motivate in promoting research. The University of Moratuwa Library has planned to initiate the “Research Commons”, a new service for the first time of the history in Sri Lankan Libraries. The purpose of this paper is to share the concept and show the pathways to build Research Commons in other University libraries of Sri Lanka. Workshops and Seminars, Research Cafe, Research Consultations, Citation Search Service, Help Desk for computing and reservation needs, Workstations with computers, Conference meeting rooms with collaborative workstations, Printing and scanning services, Information consultation by appointment are some of the services that could be provided through Research Commons. At present, some of these services are available in various divisions in the Library, and is expected to locate all such services under one umbrella in this concept. This will be a place for knowledge creation to enhance research. This academic space gives the opportunity to the user to do research and consult with Research Commons Librarian. It is expected that this will be a turning point to enhance research culture in Sri Lanka. A feasibility study is being conducted to identify the needs of a researcher.

Keywords: Library, Research Commons, University of Moratuwa

Organizational Culture and Small Business Innovation in Small Open Economies

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With globalization, ambiguity and increasing competition, small businesses are no longer competing just in their local markets. Innovations could empower them to succeed, yet the numbers of small enterprises that are innovative remains low. This is especially critical for small open economies, where small businesses contribute over 70% of jobs and gross added value. With a narrower scope of work, small businesses might face lower capacity, more constrained resources and a higher perceived risk to innovate. At the same time, they might have more flexible structures and more resilient approaches. By understanding innovation in a broader way and considering the transformation of organizational structures, behaviours and processes, small businesses could enhance their competitiveness.

This study analyses the role of organizational culture - shared values, behaviours and practices - on organizational innovation, including new organizational methods in business practices, workplace organization and external relations via an empirical study of over 500 small enterprises in Latvia. It further assesses the impact of organizational innovation on small business competitiveness.

This study confirms that stronger organizational culture, organizational learning and knowledge sharing can help to foster small business innovation and competitiveness. The study contributes to theoretical and practical discussions on fostering small business innovation in small economies.

Keywords: organizational culture, knowledge, organizational innovation, small businesses, organizational performance.