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Microwave assisted synthesis and characterization of pyrazoline derivatives from chalcones and (4-fluorophenylthio) acetic acid hydrazide

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Pyrazolines are well known important bioorganic molecules. Some new pyrazolines were synthesized by the cyclocondensation of chalcones derived from substituted acetophenone and substituted benzaldehyde with (4-fluorophenylthio) acetic acid hydrazide. Cyclocondensation was carried out by refluxing glacial acetic acid solution of reactants with a catalytic amount of polyphosphoric acid and also by subjecting the same reaction mixture to MWI. Both the reactions gave the same products with a yield of 65-70%. MWI required lesser reaction time for the completion of the reaction. Products synthesized were characterized by spectral data.

Biography

R M Ezhilarasi is an Associate Professor in the Department of Chemistry, Guru Nanak College, Chennai, India. Her field of research is synthetic organic chemistry. She teaches graduate and post graduate students and guided a number of students in their projects. She is the co-author of the book '*A Simple Approach to Group Theory in Chemistry*'. S Mahalakshmi is Associate Professor and Head, Department of Chemistry, Pachaiyappa's College, Chennai. She has more than 30 years of teaching under graduate and post graduate students and research experience. Her field of research is organic chemistry. She has guided many students for the award of M.Phil. and PhD.

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ChemistrySELECT Full Papers

Medicinal Chemistry & Drug Discovery

Synthesis and Human Anticancer Cell Line Studies on Coumarin-β-carboline Hybrids as Possible Antimitotic Agents

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A series of coumarin tetrahydro-β-carboline hybrids **3** have been synthesized by the Pictet-Spengler reaction. Stoichiometrically controlled DDQ oxidation has led to dihydro **4** and β-carboline **5.** In vitro anticancer activity against 60 cell lines has revealed the potency of **3f**, **4a** and **5c.** In silico studies indicate the binding properties of **5c** with Kinesin spindle protein (KSP) and tubulin protein. Gel electrophoresis studies revealed that compound **3f** partially cleaved the CT-DNA, whereas the ring C aromatized compound **5c** completely cleaved the CT-DNA. Structures of the newly synthesized compounds are confirmed by spectroscopic and X-ray studies.

Introduction

Naturally occurring heterocycles constitute a broad class of compounds, which are of widespread interest in view of their chemotherapeutic potential and structural diversity. Coumarins and β-carbolines represent heterocycles of plant origin, whose cytotoxic properties[1–4] have been well established. Importance of oxygenated compounds in cancer chemotherapy came to light by the understanding of the mechanism of action of colchicine[5] and combretastatins.[6] They represent a class of small molecule vascular disruptive agents, which act as tubulin polymerization inhibitors. Structural analogues of combretastatin A-4 in the form of 4-aryl coumarins (see Figure 1) have also been found to inhibit in vitro microtubule formation[7] and induce apoptosis in human breast cells.[8] Role of functionalized coumarins in the treatment of renal cell carcinoma[9] and different forms of skin cancer[10] has led to photo irradiation therapy.[11]

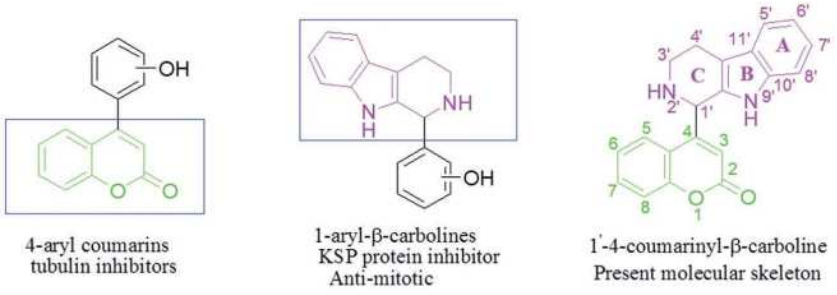

Figure 1. Design concept based on the pharmacophores of structurally related compounds.

Coumarins possessing a nitrogen heterocyclic moiety in the form of 8-acetoxy-3,3′-indolyl coumarin have exhibited as antiproliferative activity against THP1 and MCF tumor cell lines and is predicted to their binding to tubulin protein is thought to lead to inhibition of cell mitosis.[12] The effect of introducing nitrogen functionality on the anti-cancer property is reflected in the anti-tumor activity of 4-triazolyl coumarins against MCF-7, SW-480, A-549 cell lines and tyrosine kinase binding property of 4–2′-benothiazolyl coumarins.[13]

β-Carbolines isolated from *Peganum harmala* and *Eurycoma longifolia* act as topoisomerase and cyclin dependent kinase inhibitors.[14–18] The parent compound Harmine inhibited breast cancer resistant protein as revealed by cell line studies. Tetrahydro-β-carbolines act as inhibitors of the mitotic kinesin KSP (see Figure 1).[19] Ring C-aromatised-1-arylidene β-carbolines were

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Research Article

Green Synthesis and Characterization of Zinc Nanoparticle Using *Andrographis paniculata* Leaf Extract

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ABSTRACT

In this research paper, we discussed on the Synthesis and characterization of zinc Nanoparticles by green synthesis method. It attempt was made to zinc Nanoparticles is prepared by using a medicinally plant Andrographis paniculata (Family: Acanthaceae). Zinc sulphate as used to synthesis the zinc Nanoparticles by using leaf extract of Andrographis paniculata. The structural characterization of synthesized Nanoparticles was carried out using X-RD, EDAX, and SEM. The optical characterization was carried out using UV – Vis and FT – IR analysis. The results showed that the leaf extract is optimum for the synthesis of Zinc Nanoparticles and it is also known to have the ability to inhibit the growth of various pathogenic microorganisms. The synthesized Zinc Nanoparticles can be used for various applications due to its eco – friendly, non-toxic and compatibility for pharmaceutical and other applications.

Keywords: Zinc Nanoparticles, Andrographis paniculata, characterization, antimicrobial activity.

INTRODUCTION

In recent years, Nanomaterials are being used in a wide variety of applications due to its varying properties on scaling down from bulk size to nanometre size (10^{-9}m). The surface area to volume ratio plays an important role in Nanoparticles, due to which they become more reactive. Nanotechnology and Nanoparticles based product and application are increased now a days due to various fields like biotechnology, physics, chemistry, material sciences, engineering, and medicine. Zinc Nanoparticles are being widely under use in a variety of fields due to its uniqueness and attractiveness in their properties like electrical, optical, dermatological and anti-bacterial[1,2]. This makes them to be a promising element the widely distributed fields like automobiles, electronics, optoelectronics, textiles, medicine, drug delivery and cosmetics.

Most commonly, Zinc Nanoparticles are produced through chemical methods[3,4], like sol-gel processing[5], precipitation and electro deposition method[6]. Zinc has been found highly attractive because of its remarkable application potential in solar cells, piezoelectric devices, UV absorbers, pharmaceutical and cosmetic industries[7,8]. Potentially, Zinc removed all the dyes and water pollutants from textile effluent under UV light have been proved[9,10]. Nanoparticles exhibit completely new or improved properties with larger particles of the bulk materials and these novel properties are derived due to the variation in specific characteristics such as size, distribution and morphology of the particles[11]. The properties of materials change as their size approaches the nanoscale and as the percentage of atoms at the surface of a material becomes significant[12]. The growing need of environmental friendly nanoparticles, researchers are using green methods for the synthesis of various metal nanoparticles for pharmaceutical applications[13]. Although different biological based synthetic methods are known for Zn are sought by researchers. Biological process has led to the development of an eco-friendly approach for the synthesis of nanoparticles. The use of non-toxic materials like plant extract & bacteria for synthesis of zinc nanoparticles offers numerous benefits of pharmaceutical application[14].

Biological methods of nanoparticles synthesis using microorganisms[15], enzymes[16], fungus[17] and plants or plant extracts[18] have already shown to be possible.

In recent, green synthesis of Zinc nanoparticles was achieved by using microorganisms, plant extract. Zinc nanoparticles show potential antimicrobial effects against infectious organisms such as Escherichia coli, Bacillus subtilis, Vibriocholerae, Pseudomonas aeruginosa, Syphilis typhus, and Staphylococcus aureus[19,20].

In the present work was carried out to synthesize and characterize the Zinc Nanoparticles using Andrographis paniculata leaf extracts. Further Zinc nanoparticles were optical characterization using UV-VIS and FT-IR spectrometer, structural characterization using scanning electron microscopy (SEM), EDAX, X – RD and antimicrobial activities.

MATERIALS AND METHODS

Materials

3 The following analytical grade materials were used without further purification: Zinc Sulphate ($ZnSO_4$). A.C.S. reagent (Sigma – Aldrich, 99% purity by wt).

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Synthesis and Characterization of Silver Nanoparticles by Chemical Reduction Method and their Antimicrobial Activities

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Abstract : Silver nanoparticles can be synthesized using a simple solvent free, economic and eco-friendly chemical reduction method. The production of silver nanoparticles from silver nitrate and subsequently reducing with glycerol. The structural characterization of synthesized nano particles was carried out using XRD and SEM. The optical characterization was carried out using UV and FTIR. The XRD result shows that the nano particles are of spherical shape and the average crystal size of the silver nano particle is in the range of 5nm and 10nm. The SEM analysis shows that the shape of the nano particles is nano spherical. The quality and purity of the silver nano particles are confirmed using XRD spectral analysis.The nanoparticles of silver showed high antimicrobial activity against gram positive bacteria such as Escherichia coli, Staphylococcus aureus, and Pseudomonas aeruginosa which is a highly methicillin resistant strain.
Keywords: Silver nanoparticles, XRD analysis, Optical properties, Antimicrobial activity.

1. Introduction

Nanotechnology is an emerging field of science which involves synthesis and development of various nanomaterials. Particles in the nano-range display unique physical and chemical properties and represent useful materials in biological applications. The integration of nanoparticles with biological molecules has lead to the development of diagnostic devices, contrast agents, and important tools in cancer therapy. Nanoparticles are now being developed for various biological applications such as medicines, antimicrobial agents[1,2,3], wound dressing[1,4], drug targeting and deliveries [1,5,6], transfection vectors [1,7], bioimaging and labelling agents [1,8]etc.

Silver nanoparticles can be synthesized using various methods: Biological [9], hydrothermal [10], electrochemical deposition [11], photochemical [12], pulsed laser deposition [13], etc. The most popular preparation of Ag colloids is chemical reduction of silver salts by sodium borohydride or sodium citrate. This preparation is simple, but the great care must be exercised to make stable and reproducible colloid. However, Solution temperature, concentrations of the metal salt, reducing agent and reaction time influences the particle size.

In the present work, the synthesis of silver nanoparticles from aqueous solution of silver nitrate using glycerol as a reductant is carried out. Further silver nanoparticles were characterized using UV-VIS spectrometer, scanning electron microscopy (SEM) and antimicrobial activity.

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Synthesis and characterization of Copper Nanoparticles using Leaf Extract of *Andrographis Paniculata* and their Antimicrobial Activities.

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Abstract : Synthesis and characterization of copper nanoparticles is under exploration due to its wide medical applications and various research interests in nanotechnology. In the present investigation, an attempt was made to copper Nanoparticles is prepared by using a medicinally plant Andrographicpaniculata (Family: Acanthaceae). Copper sulphate ($CuSO_4$) was used to synthesis the copper Nanoparticles by using leaf extract of Andrographic paniculata.The structural characterization of synthesized Nanoparticles was carried out using X-RD and SEM. The optical characterization was carried out using UV – Vis analysis. The SEM results show that the copper Nanoparticles are spherical shape.The results showed that the leaf extract is optimum for the synthesis of silver nanoparticles and it is also known to have the ability to inhibit the growth of various pathogenic microorganisms. The synthesized copper Nanoparticles can be used for various applications due to its eco–friendly, non-toxic and compatibility for pharmaceutical and other applications.
Keywords: Copper Nanoparticles, Andrographic paniculata, characterization, antimicrobial activity.

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ARTICLE

Fabrication of a versatile chitosan nanocomposite hydrogel impregnated with biosynthesized silver nanoparticles using Sapindus Mukorossi: characterization and applications

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www.rsc.org/

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A biological and eco-friendly method has been adopted for the synthesis of silver nanoparticles. The biosynthesized silver nanoparticles (BSN) were obtained when $AgNO_3$ was mixed with Sapindus Mukorossi extract (SME) and subjected to microwave irradiation. The SME not only reduced the Ag^+ to Ag^0, but also stabilized the silver nanoparticles (AgNPs). The biosynthesis of silver nanoparticles with particle size between 35-45 nm has been confirmed by UV-Vis spectroscopy, XRD analysis, HRTEM images with EDS showing the presence of elemental silver at 3 kev. Optimization of parameters was carried out to get higher amounts of BSN. For eco-friendly utilization, BSN was impregnated into chitosan and the resulting nanocomposite hydrogel films (BSNC) were cast by physically blending varying concentrations of BSN stabilized by SME and fixed amounts of 2 % w/v chitosan solution, sodium bicarbonate; the porogen and glutaraldeyde; the crosslinker. The BSNC-15 nanocomposite hydrogel film which exhibited good water swelling property was characterized for chemical compositions by FTIR spectroscopy; thermal behavior by thermo gravimetric analysis and differential thermo gravimetric curves; the surface morphology by AFM and SEM analysis. The versatility of BSNC film have been assessed for its adsorbing and reducing nature of Cr(IV), photo catalytic nature to degrade methyl orange dye and antibacterial activity against *Staphylococcus aureus* and *Escherichia Coli*. Thus cost effective, easily processed BSNC nanocomposite films can be used to degrade Cr(IV) and methyl orange dye from the effluents and in pharmaceutical field as wound dressing material owing to its hydrogel and antibacterial nature.

Introduction

Natural polymers like cellulose, chitin, chitosan, rubber, starch, collagen, gelatin, fibrin etc are being used to prepare biomaterials.[1] Out of the above mentioned polymers it is the cellulose based polymers that are abundant in nature and can be utilized to make biomaterials of our choice.

Chitosan is a cellulose based biopolymer found in crustaceans, a very cheap and easily available natural resource. Innumerable biomaterials especially for therapeutic applications have been prepared using chitosan,[2] owing to its biodegradable, biocompatible and antimicrobial activity.[3] Recently, the focus of using them for other applications like catalyst for synthesis,[4] biosensors,[5] in electronic appliances[6] and electrical devices[7] etc is increasing in number. It is used as a heterogeneous catalyst[8,9] for synthesizing many chemical compounds, especially organic compounds because of its insolubility in most of the solvents and can be recycled after use. In water based reactions its hydrogel property is an additional feature that enhances its efficiency.[10]

Recently nanometals impregnated chitosan hydrogels have been studied for their catalytic activity,[11] as swollen hydrogels provide large free space between the crosslinked networks that can act as matrices or protecting agents against aggregation of nanoparticles and nanoreactor for nucleation and growth of nanoparticles.[12]

Among metals, noble metals like gold and silver are preferred and lot of work is being done using them. Despite being cost effective there are some limitations associated with the use of silver nanoparticles. Silver nanoparticles in the free state with less than 50 nm size, can cause toxic effects on human health and environment. The silver nanoparticles have inherent ability to agglomerate in solution with time, due to high active surface area. The above mentioned limitations can be overcome if silver nanoparticles containing composites are developed.[13] Nanocomposites of polymer/silver nanoparticles have attracted great attention because of their potential applications in the fields of catalysis, bioengineering, photonics and electronics.[14] The best way to synthesis metal nanoparticles is through biosynthesis. This has been done using naturally available materials like extracts of leaves, barks, and seeds etc which are rich in steroids, terpenoids and alkaloids. The biosynthesis process is purely natural and the extract used for synthesis acts as capping, reducing as well as stabilizing agent.[15]

Sapinus Mukorossi plant is said to possess many pharmacological properties and some of them have been reported like antifungal,[16] antimicrobial,[17] hepatoprotective,[18] spermicidal[19] and anticancer activity.[20] The extract of Sapindus Mukorossi (soapnut shells) fruit pericarp mainly composed of saponins (natural surfactants) and flavonoids[21] is being utilized for biosynthesis of noble metals. The biosynthesis of gold and silver nanoparticles assisted by sapindus mukorossi and their catalytic applications have been studied and it has been reported that the aqueous extract of Sapindus Mukorossi

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Electronic Supplementary Information (ESI) available: [details of any supplementary information available should be included here]. See DOI: 10.1039/x0xx00000x

Structural analysis and investigation of molecular properties of *Cefpodoxime acid,* a third generation antibiotic

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Abstract

Extensive quantum mechanical studies are carried out on *Cefpodoxime acid* (CA), a new generation drug by Hartree–Fock (HF) and B3LYP methods to understand the structural and spectral characteristics of the molecule. The most stable geometry of the molecule was optimized and the bond parameters were reported. The spectroscopic properties of this pharmaceutically important compound were investigated by FT-IR, FT-Raman, UV and ^{1}H NMR techniques. The scaled vibrational frequencies of CA in the ground state are calculated by HF and B3LYP methods with 6-311++G (d, p) basis set and compared with the observed FT-IR and FT-Raman spectra. The vibrational spectral analysis indicates the presence of two intra molecular hydrogen bonds in the molecule which is supported by theoretical study. ^{1}H NMR chemical shifts (δ) were calculated for the CA molecule and compared with the experimental values. The theoretical electronic absorption spectral data in water and ethanol solvents were computed by TD-DFT method. UV–Vis absorption spectra of CA are recorded in these two solvents and compared with theoretical spectra. The spectral data and natural bond orbital (NBO) analysis confirm the occurrence of intra molecular interactions in CA. The electronic distribution, in conjunction with electrophilicity index of CA was used to establish the active site and type of interaction between

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Research Article

Structural Analysis and Reactivity of Tetramethylcopper(III) Complex towards Nitrogen Donor Ligands by Density Functional Theory

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DFT studies are carried out on some ligand substitution reactions of tetramethylcuprate(III) (TMC) complex with five different nitrogen donor ligands as probe ligands. The geometry optimization of the possible nine model systems and the frequency calculations are carried out at DFT level using LANL2DZ basis set. The selected structural parameters of optimized model systems of Cu(III) complexes are reported and discussed. The change in the M-C bond distance in TMC due to substitution by probe ligands is explained. Natural population analysis (NPA) has been carried out for these complexes to establish the charge of copper in these complexes. A detailed population analysis of valence orbitals of copper complexes supports the existence of d^8 configuration for metal in complexes and there is evidence for the transmission of electrons from the nitrogen donor atom to d_{xy}, $d_{x^2-y^2}$, and 4s orbitals. Bond order calculations have been performed for all the complexes to probe the interaction between Cu(III) and the ligand. The stability of the complexes is ascertained from the computed chemical hardness. In order to understand the nature of Cu(III)-L (L = N donors) and Cu(III)-Me bonds in different complexes, Energy Decomposition Analysis (EDA) has been carried out for all the complexes chosen in the theoretical study. Thermodynamic feasibility of these reactions is investigated in terms of free energy changes of these reactions.

1. Introduction

The coinage metal copper is listed in group 11 in the periodic table and it occurs in a range of oxidation states [Cu(0), Cu(I), Cu(II), Cu(III), and Cu(IV)]. Copper ions in these oxidation states form complexes. Copper complexes in the oxidation states +1, +2, and +3 are more common than complexes of Cu(0) and Cu(IV). The Cu(III)-alkyl complexes are used for the effective C-C bond formation at low temperatures [1–5] and several Cu(III)-alkyl intermediates have also been characterized by Rapid Injection NMR technique [6–11]. Theoretical studies have been carried out to understand the stability and reactivity of Cu(III)-alkyl complexes [12–16]. Bertz et al. reported the efficient preparation of copper(III) intermediates by using Gilman reagents (Me_2CuLi, LiX where X = Br, I) with 2,3-dichloropropene [17, 18]. Recently, Bertz and Ogle investigated ligand exchange reactions of $CuMe_4$ with Br^-, CN^-, Ph_2Li, IMH, Cl_2O, and Li^+S^-Ph for selective C-C bond formation [18]. Gärtner et al. studied the ligand exchange reactions of trimethyl copper(III) with I^-, Me^-, MeS^-, Cl^-, and CN^- by DFT method [19]. Some neutral organocopper(III)-alkyl complexes have also been reported by the ligand exchange reaction with PMe_3, PBu_3, $P(OMe)_3$, PPh_3, Py, DMAP, MI, MIB, and DBN [13, 19]. The most notable applications of organocopper reagents are the addition to α,β-unsaturated carbonyl compounds and their substitution reactions with organic halides [20–22]. The formation of C-C bond in these reactions was proposed to

Synlett A. Sridhar et al. Letter

Oxidative Esterification of Aromatic Aldehydes Using Polymer-Supported Green Bromine

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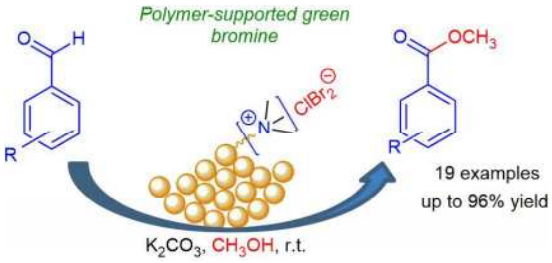

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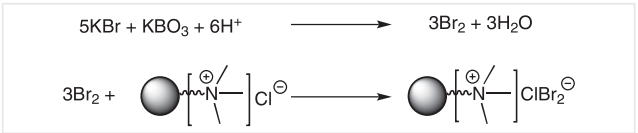
Abstract A facile one-pot green chemical conversion of aromatic aldehydes to alkyl esters is described using polymer-supported bromine chloride resin in the presence of potassium carbonate at room temperature. This eco-friendly methodology with simple workup procedure and recovery and recyclability of the resin makes the transformation simple and efficient.

Key words bromine chloride resin, esterification, oxidation, aldehyde, hypobromite ion

The oxidative one-pot transformation of an aldehyde to an ester is an extremely useful functional-group interconversion in organic synthesis. Several protocols have been reported for this transformation using different transition-metal oxidants such as V_2O_5,[1] $Fe(ClO_4)_3$,[2] $ZnBr_2$,[3] palladium,[4] gold,[5] halogen-derived oxidants such as *N*-halosuccinimide,[6] hypohalites,[7] pyridinium hydrobromide perbromide,[8] molecular bromine,[9] molecular iodine,[10] hypervalent(III)iodine,[11] *N*,*N*-dibromo-*p*-toluenesulfonamide,[12] and $NaIO_4$/LiBr.[13] Despite intensive efforts into the oxidative esterification of aldehydes, the development of a more effective, mild, and eco-friendly method still remains a challenge since many reported methods require heavy-metal oxidants, anhydrous conditions, and extended reaction time or give poor yields of the products.

Application of polymer-supported reagents in organic synthesis has grown over the years due to the convenience in handling, easy workup procedures, and recyclability of the reagents. Polymer-supported iodate,[14] periodate,[15] bromate,[16] hypochlorite, and dichloroiodo resins,[17] used as oxidizing agents, have reported in the literature. However, there is no report on polymer-supported bromine chloride resin in oxidation reactions. In this paper, we describe the preparation of a polymer-supported bromine chloride resin and oxidation reactions of aromatic aldehydes carried out with this reagent.

Gopalakrishnan et al.[18] have reported the preparation of polymer-supported bromine chloride resin by treating commercially available Amberlite IRA-400 chloride resin with bromine in carbon tetrachloride. Since this method involves the use of elemental bromine and carbon tetrachloride, we simplified the preparation of the same bromine chloride resin by treating commercially available, oven-dried IRA-400 resin with a mixture of potassium bromate and potassium bromide in the presence of dilute hydrochloric acid. Bromine liberated from a bromate–bromide mixture in acid medium converts IRA-400 chloride resin into the bromine chloride resin (Scheme 1).



Scheme 1 Preparation of bromine chloride resin using a bromide–bromate mixture

The bromine chloride resin prepared by both methods possesses the same amount of bromine, as indicated by the same increase in the weight of the IRA-400 resin and also by volumetric estimation with $Na_2S_2O_3$ (Table 1). There was no appreciable change in the bromine content after exposure to microwave irradiation for five minutes or storage for five days (Table 2 and Table 3).

Bromine can behave as a mild oxidizing agent under basic conditions due to the formation of hypobromite. This was confirmed through UV-Vis absorption spectral studies. UV absorption spectra were recorded for Winkler's solution, containing potassium carbonate and an aqueous sus-

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Sunlight assisted synthesis of silver nanoparticles in zeolite matrix and study of its application on electrochemical detection of dopamine and uric acid in urine samples

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Urine samples

ABSTRACT

Sunlight assisted reduction of silver ions were accomplished for the synthesis of silver nanoparticles incorporated within the mesoporous silicate framework of zeolite Y. The zeolite-Y and AgNP/Zeo-Y were characterized by field emission scanning electron microscopy, transmission electron microscopy, N_2 adsorption-desorption BET isotherm and X-ray diffraction techniques. The incorporation of silver nanoparticles within the porous framework was further confirmed by cyclic voltammetry and electrochemical impedance spectroscopy. An enhanced electrocatalytic oxidation of biologically important molecules like dopamine and uric acid using AgNP/Zeo-Y modified glassy carbon electrode has been developed. A simultaneous oxidation of DA and UA peaks were obtained at +0.31 V and +0.43 V (vs. Ag/AgCl) using AgNP/Zeo-Y/GCE under the optimum experimental condition. A well-resolved peak potential window (~120 mV) for the oxidation of both DA and UA were observed at AgNP/Zeo-Y/GCE system. The calibration curves for DA and UA were obtained within the dynamic linear range of 0.02×10^{-6} to 0.18×10^{-6} M ($R^2 = 0.9899$) and 0.05×10^{-6} to 0.7×10^{-6} M ($R^2 = 0.9996$) and the detection limits were found to be 1.6×10^{-8} M and 2.51×10^{-8} M by using differential pulse voltammetry (DPV) method. The proposed method was successfully applied for the determination of both DA and UA in human urine samples with a related standard deviation was <3%, and n = 5 using the standard addition method.

1. Introduction

Zeolite is a mesoporous alumina silicate based solid materials and its contain well defined open-pore structure, with often the tunable pore size and they are very attractive host materials for developing nanocomposites because of their ability to selectively exchange and integrate transition metal cations within their cages and interconnecting channels [1]. The metal modified porous materials have been used for the wide range of applications like catalysis [2,3], anti-bacterial materials [4], fuels [5], water treatment [6,7], and biosensors [8–12]. Recently, zeolite modified electrodes (ZMEs) have continued to be a major concern because of its surface area, porous nature, surface functionalization and chemical inertness [13–15]. ZMEs are widely used in ion-exchange [16], electrocatalysis and electroanalytical devices with better sensitivity [17], high thermal and chemical stability [18]. Nowadays, the ZMEs were accomplished in various routes through copper doped zeolite expanded graphite epoxy electrode [19], iron-ion doped natrolite zeolite-MWCNT modified GCE [20], Ag-doped zeolite expanded graphite-epoxy composite electrode [21], methylviologen supported on zeolite Y modified electrode [22], graphite-zeolite modified electrode [23], mesoporous carbon [24], cytochrome c immobilized on NaY zeolite [25], methylene blue incorporated into mordenite zeolite [26] bismuth modified zeolite doped CPE [27], $NiCo_2/O_4$/nano-ZSM-5 nanocomposite [28] and Ru-red incorporated zeolite modified CPE [29].

Dopamine (DA) is usually coexisting with uric acid (UA) in biological fluids which are playing an important role in human metabolism [30]. The abnormal concentration level of these molecules will lead to certain diseases such as schizophrenia, Parkinson's disease, hyperuricemia, gout and Pneumonia [31,32]. Therefore, the development of selective and sensitive method is important to determine the concentration level of DA and UA accurately. The electrochemical methods are accessible for sensing and quantification of DA and UA due to simple, more accurate with lower detection limits, high electrocatalytic activity and large potential window [33]. However, the oxidation of DA and UA are occurring in the same potential region at conventional electrodes. To overcome this problem, various kinds of chemically modified electrodes were utilized to resolve well-defined peak separation between DA and UA system. For example, copper nanoparticles incorporated polypyrrole

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Original Research Article **Biochemistry**

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ANTIOXIDANT PROPERTY OF THE CRUDE PEPTIDE EXTRACTS OF A FRESH WATER CRAB *Oziotelphusa senex senex*

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ABSTRACT

Crustaceans have been recognized as rich sources of bioactive compounds with valuable nutraceutical and pharmaceutical potentials. Fresh water crab Oziotelphusa senex senex is the abundantly existing crab with unknown health benefits Cellular damage caused by reactive oxygen species has been implicated in several diseases; hence antioxidants have significant importance in human health Antioxidants play an important role as health protecting factor.Scientific evidences suggests that antioxidants reduce the risk for chronic diseases including cancer and heart diseases .So the.the antioxidant activity of the hemolymph from the fresh water Crab *Oziotelphusa senex senex was*. evaluated .Hemolymph of *Oziotelphusa senex senex* a fresh water crab, were subjected for its antioxidant activity using DPPH,ABTS and hydrogen peroxide scavenging assays. In antioxidant assay, the percentage of 2, 2-diphenyl-1-picrylhydrazyl scavenging activity was recorded as 57.5%. ABTS scavenging activity (68%) hydrogen peroxide scavenging (64%).The antioxidant activity of the hemolymph increased in a concentration dependent manner. Hence, the present study revealed that the hemolymph from the fresh water crab *Oziotelphusa senex senex* can be used as an accessible source of natural antioxidants with consequent health benefits.

KEYWORDS: Crab, *Oziotelphusa senex senex,* Hemolymph, DPPH ,ABTS.

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Research Article

ANTIOXIDANT ACTIVITY, TOTAL PHENOL, FLAVONOID, ALKALOID, TANNIN, AND SAPONIN CONTENTS OF LEAF EXTRACTS OF *SALVINIA MOLESTA* D. S. MITCHELL (1972)

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ABSTRACT

Objective: The main aim of the study was to screen the leaf extracts of *Salvinia molesta* D. S. Mitchell, a fresh water weed to evaluate the antioxidant activity and also to quantify total phenol, flavonoid, alkaloid, tannin, and saponin contents to find possible sources for future novel antioxidants in food and pharmaceutical formulations.

Methods: Qualitative and quantitative analyses of significant phytochemicals were performed by standard methods. The antioxidant activity was evaluated using extracts of aqueous, ethanol, methanol, chloroform, and petroleum ether by the diphenyl-2-picrylhydrazyl assay. Butylated hydroxytoluene, gallic acid (GA), and quercetin (Q) were taken as standard.

Results: Among the five different solvents, the maximum antioxidant activity of *S. molesta* was found in the ethanolic extract (90.3%) followed by other solvents. Total phenolic content measured by Folin–Ciocalteau method was 9.84 mg GA equivalents/g and the total flavonoid contents as measured by aluminum chloride method was 10.89 mg quercetin equivalents (QE)/g. Alkaloids, tannins, and saponins were measured by standard methods and found in significantly high ranges exhibiting a rich source of phytochemical constituents ensuring the plant as a useful therapeutic agent.

Conclusion: *S. molesta* a fast growing fresh water weed also abundantly available in nature possess significant antioxidant activity and hence can be used as a potent therapeutic agent.

Keywords: *Salvinia molesta*, Antioxidant activity, Total phenol, Flavonoid, Alkaloid, Tannin, and Saponin.

INTRODUCTION

Medicinal plants play a pivotal role in the health care of ancient and modern cultures [1]. Natural plant products have been used for therapeutic purposes since time immemorial, and their use is of greater demand nowadays. Majority of the users rely on herbal medicines for health care because the other treatment options are a more expensive and they are often thought to be more associated with serious side effects [2]. Therefore, there is continuous and urgent need to discover new therapeutic compounds with diverse chemical structures and also novel mechanism of action is required for new and emerging infectious diseases [3]. Reactive oxygen species (ROS), such as superoxide anion, hydroxyl radical and hydrogen peroxide, and free radicals, plays a crucial role in the development of various ailments such as immunodepression, diabetes mellitus, ageing, dementia, carcinoma, and Parkinson's disease [4]. Many natural herbs contain antioxidant compounds which protects the cells against the damaging effects of ROS. Though our body is safeguarded by the natural antioxidant defense, there is always a demand for antioxidants from external natural source. In addition, secondary metabolites, such as phenolic compounds, flavonoids, alkaloids, and tannins, are widely distributed in plants and are reported to exert multiple biological effects, including antioxidant, free radical scavenging abilities, anti-inflammatory, anti-carcinogenic effect, etc. [5]. Aquatic weeds are those unabated plants which grow and complete their life cycle in water and cause harm to the aquatic environment directly. The menace of aquatic weed is reaching alarming problems in many parts of the world, but it is particularly severe in tropical countries [6]. Aquatic weed populations often reach nuisance proportions and interfere with beneficial uses of natural waters. A few of them are consumed by local people but many remain unutilized and go to waste [7]. Though these aquatic weeds are a disturbing factor to the environment they possess significant unexplored medicinal properties which may serve as a potent therapeutic agent for many emerging diseases. Furthermore, there is a growing interest all over the world to discover the untapped medicinal properties of aquatic weeds. *Salvinia molesta* D. S. Mitchell (Table 1), a free-floating aquatic fern, is one of the world's largest aquatic weed whose explosive growth had devastating socio-economic impacts in parts of Africa, Sri Lanka, Asia, Philippines, and Australia. *S. molesta*, commonly known as giant *Salvinia* or Kariba weed belongs to the family *Salviniaceae*, a fresh water fern [8]. It is a free floating plant that does not attach to the soil, but instead remains buoyant on the surface of a body of water. *S. molesta* prefers to grow in slow-moving waters such as those found in lakes, ponds. Thus, this particular plant species *S. molesta* D. S. Mitchell available in abundant can be utilized to generate novel medicinal compounds to cure emerging diseases. Hence, the present study was aimed at exploring the positive medicinal values of *S. molesta* by evaluating the antioxidant activity, relative content of total phenol, flavonoids, alkaloids, tannins, and saponins in leaf extracts of *S. molesta* procured from fresh water lakes of Kalyiyakkavilai, Kanyakumari, Tamil Nadu, India.

METHODS

Collection of *S. molesta*

The fresh *S. molesta* whole plant were collected from lakes at Kalyiyakkavilai Kanyakumari district and the leaves alone were separated, drained and allowed to air dry.

Table 1: Taxonomy of plant

Kingdom	*Plantae*
Division	*Pteridophyta*
Class	*Polypodiopsida*
Order	*Salviniales*
Family	*Salviniaceae*
Genus	*Salvinia*
Species	*S. molesta*
Binomial name	*S. molesta D. Mitchell*

S. molesta: Salvinia molesta

Original Research Article **Bioinformatics**

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INSILICO CHARACTERISATION OF PROTEINS OF *SALVINIA MOLESTA* D.S.MITCHELL AN AQUATIC WEED AND ASSESSMENT OF NANOPARTICLE SYNTHESISING ABILITY OF CLOSELY RELATED PLANT SPECIES

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ABSTRACT

The main aim of the study is to analyse the proteins of *Salvinia molesta* using various bioinformatics tools.The proteins were structurally as well as functionally characterized using tools like protparam,SOPMA and SOSUI. NAD(P)H quinone oxidoreductase protein in *Salvinia molesta* was selected for evaluation and protein BLAST was performed.Primary structure prediction were performed to evaluate physical and chemical characteristics of proteins *viz*.,Molecular weight, pI etc.The secondary structures like alpha helix, beta turns etc.,were studied.Transmembrane protein was identified and analysed.NAD(P)Hquinone oxidoreductase possess the abilty to reduce metals and hence *Salvinia molesta* was predicted for its ability to synthesis nanoparticles.Finally, phylogenetic analysis was carried out using NJ plot.Phylogenetic tree revealed the closeness of *Salvinia molesta* with plants like *Azolla caroliniana, Lygodium japonicum* etc.,revealing the efficacy of these plants also in synthesising nanoparticles.

KEYWORDS: *S.molesta*,BLAST,Expasy,NAD(P)H,quinine Oxidoreductase, Nanoparticles.

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Antimicrobial Potential of Hemolymph of A Fresh Water Crab *Oziotelphusa Senex Senex* ((Fabricius 1798)

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Abstract: Crustaceans, have an immense immunological defence against pathogenic microorganisms. In the present study, effort has been made to find the antimicrobial activity of haemolymph collected from a freshwater crab *Oziotelphusa senex senex*. The hemolymph collected was subjected to antimicrobial assay by well diffusion method against clinical pathogens. Six bacterial species namely *Escherichia coli, Klebsiella pneumonia, Streptococcus pyrogenes Pseudomonas aeruginosa, Staphylococcus aureus and Bacillus sp.* The result shows a strong response of haemolymph against the clinical pathogens which confirms the immune mechanism of the freshwater crab.
Keywords: *O senex senex*, AMP, Hemolymph, antibacterial activity, pathogens.

Introduction

The emergence of new infectious diseases and resistance to antibiotics by the existing ones led to the development of new drug discovery(1).Antimicrobial peptides are important in the first line of the host defense system of many animal species. Their value in innate immunity lies in their ability to function without either high specificity or memory. Moreover their small size makes easy to synthesize without dedicated cells or tissues and they rapidly diffuse to point of infection(2). Recent experimental data from invertebrates suggests the past exposure to pathogens in individual animals can lead to enhanced immunity and some are also known to have considerable specificity by recognizing non self pathogen associated receptors that are highly conserved in evolution(3). Some of the known innate responses in invertebrates include phagocytosis, nodulation and encapsulation, synthesis of AMP and activation of proteolytic cascades that lead to melanization, blood coagulation, release of stress responsive proteins and molecules believed to function in opsonization and iron sequestration(4). The crabs are in intimate contact with aquatic environment rich in pathogenic microbes and are prone to infection by those microbes at various stages of growth, and losses due to disease can be enormous (5). An. Over the past several years, many antimicrobial peptides have been found and characterized in crab species. The first antimicrobial pepitde characterised was a proline peptide of 6.5KDa from the hemocytes of the shore crab Carinus maenas (6). The antimicrobial peptide Callinecin is a cationic antimicrobial peptide of 3.7 KDa isolated from the blue crab, *Callinectus sapidus*. (7).Recently, scygonadin, an anionic antimicrobial peptide isolated from seminal plasma of the mud crab *Scylla serrata*(8).

Antimicrobial activity has been detected in several decapod crustaceans, including lobsters, crabs, shrimps and freshwater crayfish (9,10). Fresh water crabs are an important of the fauna of limnic environments (11).About 1300 species of fresh water crabs are distributed throughout the tropics and subtropics(12).Some of the Brachyuran crabs have shown pronounced activities and may be useful in the Biomedical area .The

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A bioinformatics approach reveals the insecticidal property of *Morinda tinctoria Roxb.* against the cotton bollworm *Helicoverpa armigra*

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Abstract

Botanical insecticides have been acknowledged as attractive alternatives to synthetic chemical insecticides for pest management as they apparently pose little hazard to the environment or to human health. A number of plant substances have been considered for use as insect antifeedant and repellent. Studying the insecticidal property of plants against the insects is a difficult process. Hence we have done an insecticidal property analysis of phytochemicals derived from Chloroform, Ethyl acetate and Methanol extracts of root-bark and fruit of *Morinda tinctoria* against the cotton bollworm *Helicoverpa armigera* using bioinformatics approaches such as molecular structure property analysis, homology modeling and docking studies. Nine compounds from the root-bark and fruit extract of *M.tinctoria* were observed to strictly follow Tice rule and 8 compounds present in the extract and also known to have insecticidal property from literature were selected as ligands. The enzymes Acetylcholinesterase, Carboxylesterase and Protease of *Helicoverpa armigera* were decided as targets for the docking studies. The 3D structure of targets was modeled and the interaction between the enzymes and phytochemicals were studied using molecular docking studies in order to find effective insecticide.

Top

Keywords

Molecular docking, *Morinda tinctoria*, Insecticidal properties.

Top

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Research Article

Evaluation and Screening of Natural Antioxidant Biomolecules from Flavonoid Rich Fraction of *Premna corymbosa* Rottl

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Available Online: 2nd December, 2015

ABSTRACT

Objective: To evaluate the screening of natural antioxidant molecules and radical scavenging activities of flavonoid rich fractions from the leaves of *Premna corymbosa*. Methods: The total phenolic contents were estimated by Folin–Ciocalteu method adopted by Djeridane et al and total flavonoid content was measured according to Quettier-Deleu et al method. Antioxidant activities of flavonoid rich fraction of *P. corymbosa* was tested on the basis of ABTS (2,2'-azino-bis-3-ethyl benzthiazoline-6-sulphonic acid) radical, Super oxide radical, Nitric oxide radical scavenging activity, metal chelating and reducing power activity. Results: The total phenolic and flavonoid content in flavonoid rich fraction of *P. corymbosa* was 36.8±13.00 mg GAE/g and 78.2±1.23µg RE/g respectively. The flavonoid rich fraction of the leaves of *P. corymbosa* showed significant antioxidant activity. The reducing power of the flavonoid rich fraction was comparable with ascorbic acid and found to be dose dependant. EC_{50} values of flavonoid rich fraction of the leaves of *P. corymbosa* were 13.78, 19.39, 12.55 and 14.44 µg/ml in ABTS, superoxide radicals, Nitric oxide radical scavenging and Metal chelating activities respectively. TLC bioautography analysis revealed the presence of flavonoid compound. GC–MS analysis of the flavonoid rich fraction showed the identification of 14 major compounds such as, Catechol, 1-Hexadecanol, Phenol 2-6 dimethoxy, 1-Decanol,2-hexyl, Benzaldehyde and 2 hydroxy-3-methoxyl. Conclusion: This research work has concluded that the flavonoid rich fraction of *P. corymbosa* possess antioxidant activity and may contribute to the wellbeing of individuals who consume them.

Key Words: *Premna corymbosa,* antioxidant, flavonoid rich fraction, antioxidant molecules.

INTRODUCTION

India is a repository of rich medicinal herbs which have been traditionally used. Medicinal plants played an important role in the treatment of diseases and health disorders for thousands of years and are still important in traditional systems of medicine around the world[1]. The world Health Organization has also estimated conservatively that 60-90% of the population of non-industrialized countries rely, either totally or partially on medicinal plants to meet their health care needs[2]. Tribals depend on the medicinal plants for their day-to-day life starting from food to health care[3]. The ethno botanical reports provide the information on several medicinal plants[4]. In Siddha system of medicine, it is cited as "Food as Medicine". But now the concept is shifted to "Medicine as Food "due to the fast food culture by the modern societies[5]. Even with the discovery of many novel drugs that can cure the disorders, the affordability, especially for those in developing countries is the major limitation. For the past two decades, humans were in search of effective drugs that will combat deadly diseases without any side effects[6].

Non-communicable diseases are increasingly becoming the major threats to the health care systems in the world. It is currently hypothesized that many diseases are due to oxidative stress that results from an imbalance between the formation and detoxification of pro-oxidants. Oxidative stress is initiated by Reactive Oxygen Species (ROS) which are produced as a by-product of electron transport in Mitochondria[7]. ROS is also additionally produced in cells as a response to several factors, including oxidative and thermal stress, ultraviolet, chemical agents and ionizing radiation. Reactive nitrogen and oxygen species like nitric oxide, singlet oxygen, hydrogen peroxide, superoxide, hydroxyl and peroxyl free radicals are widely considered to be the critical part of this epidemiological transition[8]. This is because of the capacity of these reactive species when accumulated within body in excess amount cause oxidative stress leading to DNA damage, cell functions inhibition, lipid and protein peroxidation and disturbance of glutathione levels[9] thereby cause chronic inflammation, cancer, atherogenesis and vascular diseases, pulmonary and age related pathology and diseases[10-12].

Nowadays, there is a noticeable interest in antioxidants, especially in those which can prevent the presumed deterious effects of free radicals in the human body, and to prevent the deterioration of fats and other constituents of food stuffs[13]. In both the cases, there is a preference for antioxidants from natural rather than synthetic sources[14]. At present most of the antioxidants are manufactured synthetically. The main disadvantage with synthetic antioxidants is the side effects in vivo[15]. Previous studied

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Original Article

ASSESSMENT OF GENETIC DIVERSITY OF TRIGONELLA FOENUM-GRACEUM L. IN NORTHERN INDIA USING RAPD AND ISSR MARKERS

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ABSTRACT

Objective: The main aim of this study was to assess genetic diversity and phylogenetic relationships of different varieties of fenugreek (8 varieties and 6 populations) collected from northern India using RAPD (Random Amplified Polymorphic DNA) and ISSR (Inter Simple Sequence Repeat markers).

Methods: DNA Samples were analyzed with 400 RAPD and 100 ISSR primers. For statistical analysis data were subjected to UPGMA (Un weighted pair-group method with arithmetic averages), Jaccard's similarity coefficient values were obtained using Similarity for Qualitative Data (SIMQUAL), to find out genetic relationship. This analysis generated dendrogram which was further compared using the Mantel matrix correspondence test (NTSyS-pc version 2.02i) and Principal coordinates analysis.

Results: Polymorphism frequency of 42.91% and 55.66% was found in different varieties of fenugreek using RAPD and ISSR markers respectively. Based on the combined data of RAPD+ISSR marker system the maximum similarity index was observed for accessions from Mathura and RMT-143 (0.85) whereas the minimum similarity index was observed for RMT-351 sand RMT-303 (0.26).

Conclusion: The investigation has demonstrated that cluster analysis could be profitably used in unravelling the genetic variation within the accessions and the two molecular markers, RAPD and ISSR could be used as effective tools to evaluate genetic diversity and assess genetic relationship in fenugreek.

Keywords: Genetic diversity, ISSR, Polymorphism, RAPD, *Trigonella foenum-graecum* L.

INTRODUCTION

The genus *Trigonella* is one of the largest genera of the tribe Trifoliate in the family Fabaceae and subfamily Papilionoideae [1]. Fenugreek (*Trigonella foenum-graecum* L. fam: Fabaceae) is an annual forage legume crop. The name *Trigonella* means "triangle shaped pale yellow flower" and *"foenum-graecum"* means "Greek hay" indicating its use as a forage crop [2]. It is supposed to be native to the Mediterranean region but now is grown as a spice in most parts of the world including Rajasthan, Gujarat, Uttaranchal, Uttar Pradesh, Madhya Pradesh, Maharashtra, Haryana and Punjab in India [3]. It is diploid and adapted to self-pollination [4] and fairly tolerant to frost and low temperature.

The major bioactive compound of fenugreek seeds are trigonelline and sapogenins. In china, the fenugreek seeds are used as a pessary to treat cervical cancer. In the Middle East and the Balkans, the aerial part of the plant is used for abdominal cramps associated with both menstrual pain and diarrhea or gastroenteritis [5] Antitumor, antioxidant [6], cholesterol-lowering activity, antidiabetic, antiplasmodial activity [7], anti hepatotoxic and nephrotoxic, anti-inflammatory [8], prophylactic activity [9] of fenugreek have reported by researchers all over the world. The mucilaginous seeds are used as a tonic, emollient, carminative, demulcent, astringent, expectorant, restorative, aphrodisiac and vermifugal properties, to cure mouth ulcers, chapped lips and stomach irritation [10].

According to Spice Board of India, annual production of fenugreek in India (2014), 110530 tons/90500 hectare land is expected, and it has a great overseas market demand. Basu *et al.*, 2007c [11] reported that fenugreek breeding was tried through various mutagens but the major problem comes intermediate growth habit and late maturity. The foundation for Innovation in medicine, USA has introduced a term recently, called nutraceuticals. Fenugreek finds use in the global nutraceutical industry, with India having the maximum share of these international markets.

Lack of information on genetic diversity and intra specific relatedness in *Trigonella* has limited scope for genetic improvement and hence effective conservation and management of its germ plasm resources. RAPD and ISSR markers have caught the fancy of many individuals in the field of applied plant breeding. RAPD was found to be simple and efficient among the available DNA-based techniques [12] and furthermore sequence information is not needed [13, 14]. With the availability of this genetic tool, genetic diversity and genetic analysis can also be estimated [15-18]. Furthermore, RAPD techniques are advantageous because of their simple requirement of a small quantity of DNA and their ability to uncover a large number of polymorphisms [19, 20].

The current investigation presents the results of the characterization of fourteen varieties of *T. foenum-graecum* collected from different locations of northern India using molecular analysis to understand their genetic richness and its diversity.

MATERIALS AND METHODS

Collection of plant material

A total of 14 varieties/populations [table 1] of *Trigonella foenum-graecum* L. (fam: Fabaceae) were collected from different locations in Northern India. Seeds of defined varieties grown in Rajasthan were procured from the Department of Plant Breeding and Genetics, S. K. N College of Agriculture, Jobner, Jaipur (Rajasthan) and Punjab Agricultural University, Ludhiana. Seeds of various populations were sampled from UP, MP, Punjab and Rajasthan and each accession was given a specific code.

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IJB

ANTICANCER PROPERTY OF A PIGMENT EXTRACTED FROM A CRUSTACEAN SHELL WASTE

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ABSTRACT

As patients with cancer conditions are increasing in India tremendously, there is a need for personalized therapies. The mortality of cancer is related to its chemotherapy. Thus there is need for to develop a suitable anticancer therapy with reduced toxicity. Thus in this current work an attempt is made to study the anticancer property of astaxanthin , which is extracted from the dry shell waste of *Fenneropeneaus merguiensis* against PC 3 cell lines, a suitable model for prostate cancer. It has been identified by cell viability assay, by using MTT as the substrate that astaxanthin is able to exhibit the toxicity of PC 3 cell lines even at minimum concentration of 3.12 µg/ml and IC_{50} value as 18.75 µg/ml.

Key words: Astaxanthin, PC 3 cell lines, MTT assay.

INTRODUCTION

India sub-continent is one of the most diversified human populations in world. Cancer rates are low in India, when compared to the human population in other countries. The current trend in India is now slightly shifting and the populations of people who are suffering from oesophageal, prostrate and oral cancer are increasing (Sinha *et. al*., 2003). The increasing rate of certain cancers could be attributed to the change in lifestyle of Indian population. According to medical oncologist in an article in Times of India, September, 29th, 2013; suggested that the current of increase level of prostate cancer in India is due to the consumption of deep fried foods is consumed more than once in a week. This is due to the consumption potential carcinogens such as like acrylamide, heterocyclic amines and polyaromatic hydrocarbons.

Though the mortality due to cancer is high, many advances have been made both in terms of treatment and understanding the biology of the disease at the molecular level (Doll, 2003). The increased number of patients with prostate cancer among Indian population could also be associated with age of the individual (Ganesh *et al*., 2013; Patel *et. al.,* 2013). Prostate cancer is second largest common cancer among men in the world. During the year 2012, 1.1 million men around the world are affected by prostate cancer, among which 70% of cases occur in developing countries and in 1.1 million cases 307,000 cases result in mortality (Girish *et al*., 2014).

Carotenoids are organic soluble substances, present in both animal and plant system. Many carotenoids, such as β-carotene, α-carotene, lycopene, lutein, zeaxanthin, β-cryptoxanthin, fucoxanthin, canthaxanthin and astaxanthin, have been analysed extensively for their anticancer properties (Takuji *et al*., 2012). Among the β-carotene family, astaxanthin has the highest anticancer properties. Carotenoids have good biological properties such as light protection, immunoenhancement and also anticancer activity.

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Adjacent vertex distinguishing total coloring of grid graphs and shadow graphs

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Abstract- **An adjacent vertex distinguishing total coloring of a graph G is a proper coloring of G in such a way that any pair of adjacent vertices have distinct set of colors. The minimum number of colors needed for an adjacent vertex distinguishing total coloring of G is denoted by $\chi_{at}(G)$. In this paper, we have discussed the adjacent vertex distinguishing total coloring of grid of diamonds, grid of hexagons and shadow graphs of (i) a path and (ii) a cycle. We have also discussed the adjacent vertex distinguishing total coloring of a crown graph.**

Keywords- Grid of diamonds; Grid of hexagons; Shadow graph; Path; Cycle; Crown graph; Adjacent vertex distinguishing total coloring and Adjacent vertex distinguishing total chromatic number.

AMS Subject Classification: 05C15

I. INTRODUCTION

If $G=(V(G),E(G))$ is a graph with the vertex set $V(G)$ and the edge set $E(G)$, a proper total coloring of G is an assignment of colors to the vertices and the edges in such a way that

1. no two adjacent vertices are assigned with the same color,
2. no two adjacent edges are assigned with the same color,
3. no edge and its end vertices are assigned with the same color and
4. for every adjacent vertices have distinct set of colors.

Zhang et al. [1] introduced the concept of an adjacent vertex distinguishing total coloring and found the adjacent vertex distinguishing total chromatic number for a cycle, a complete graph, a complete bipartite graph, a wheel and a tree. They have also posed the following conjecture:

For any graph G with order at least 2,
we have $\chi_{at}(G) \le (G)+3.$

Chen [2] and Wang [3] confirmed that this conjecture is true for graphs with $\Delta(G)=3$ whereas Hulgan [4] presented a proof for this conjecture for a complete graph and a cycle. Chen et al. [5] have verified this conjecture for a generalized Halin graphs with maximum degree at least 6. Wang et al. [6] have verified this conjecture for planar graphs. Papaioannou et al. [7] have discussed adjacent vertex distinguishing total coloring of 4 - regular graphs. Sudha et al. [8] have discussed and found in general the adjacent vertex distinguishing total coloring of corona product of two paths; two cycles; two complete graphs; a path and a cycle; a cycle and a path; a complete graph and a path; a complete graph and a cycle. Luiz et al. [9] have found the adjacent vertex distinguishing total chromatic number of complete equipartite graph of even order $\Delta(G)+2.$

In this paper, we have obtained the adjacent vertex distinguishing total coloring of grid of diamonds, grid of hexagons and shadow graphs of (i) a path and (ii) a cycle. We have also discussed the adjacent vertex distinguishing total coloring of a crown graph.

II. SUDHA GRID OF DIAMONDS

Definition 2.1. Sudha grid of diamonds $S_d(m,n)$ is an induced subgraph of the tensor product of two

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Fuzzy optimization of a multiproduct economic production quantity problem with stochastic constraints using sequential quadratic programming

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Abstract— In this paper ,a multiproduct single vendor - single buyer supply chain problem is investigated based on the fuzzy economic production quantity model developed for the buyer to minimize the fuzzy inventory cost.. In this model we consider the fuzzy total cost under crisp order quantity or fuzzy order quantity in order to extend the traditional inventory model to the fuzzy environment. In this all related inventory parameters are assumed to be Trapezoidal fuzzy numbers. We use Function Principle as arithmetic operations of fuzzy total cost and use the Graded Mean Integration Representation Method to defuzzify the fuzzy total cost. Then we use the Kuhn-Tucker method to find the optimal order quantity of the fuzzy order inventory model. Further a numerical example is also given to demonstrate the developed crisp and fuzzy models.

Keywords— Fuzzy EOQ, Stochastic constraints, Sequential quadratic programming , Function Principle ,Graded mean integration representation, Kuhn-Tucker Method

1.INTRODUCTION

The fuzzy set concept has been used to treat the classical inventory model recently. Since Harris (1913)(10) first published the basic EOQ model, many variations and extensions have been developed In the real world, the parameters and variables in inventory model may be almost uncertain datum. Fuzzy inventory model has been discussed recently. In 1987, Park (12) used fuzzy set concept to treat the inventory problem with fuzzy principle. In 1996, Chen et al.,(5) introduced back ordered fuzzy inventory model under function principle and also discussed fuzzy inventory model for crisp ordered or for fuzzy ordered quantity with generalized trapezoidal fuzzy number. Chang(9) presented the membership function of the fuzzy total cost of inventory model and used the extension principle to obtain the EOQ. In this paper we introduce the fuzzy inventory models in which fuzzy parameters and fuzzy ordered quantity are all trapezoidal fuzzy numbers. In order to simplify the calculations of trapezoidal fuzzy number we use Chen's function principle instead of extension principle to calculate fuzzy total inventory cost of our proposed model. Function principle is proposed as the fuzzy arithmetical operations of fuzzy numbers in 1985. Also the principle is proven that it does not change the type of membership function under fuzzy arithmetical operations of fuzzy numbers. In the fuzzy sense it is reasonable to discuss the grade of each point of support set of fuzzy number for representing fuzzy numbers. Therefore Chen and Hsieh's (6) graded mean integration representation method adopted grade as an important degree of each point of support set of generalized fuzzy number. With this reason we use it to defuzzify the trapezoidal fuzzy total inventory cost. Furthermore, the Kuhn-Tucker method is used to solve inequality constraints in fuzzy single supplier multiple retailer inventory model for fuzzy ordering quantity. The economic production quantity model s often used in the manufacturing sector to assist firm in determining the optimal production lot size that minimize overall production inventory costs. Jamal et al. (1)developed an EOQ model to determine the optimum batch quantity in a single - stage system. Huang introduced an EPQ model in which imperfect products were allowed into the produced lot sizes .Chiu et al.(13) considered the effect of random defective rate and imperfect rework process on the EOQ model. Chang investigated the effect of imperfect products on the total inventory associated with an EPQ model Sarker et al. (4) introduced extended EPQ model dealing with the optimum production quantity in a multi-stage system in which rework was performed under two different operational polices to minimizes the total system cost .Jaber(14) et al. developed an EPQ model for items with imperfect quality items were withdrawn from inventory and sold at a discount prize. Liao et al studied an integrated maintenance and production system with n EPQ model for an imperfect process involving a defective production system under increasing failure rate. Widyadanaa (8)and we provided a multi product EPQ vendor -buyer integrated model just -in-time philosophy under budget [constraint. Pasandideh et a (16) developed a multi product EPQ model in which there were some imperfect items of different types being produced such that rework were allowed and that there was a ware house space limitation. Taleizadeh et al (2) studied two joint production system in the form of a multi product single machine with and without rework. Pasandideh et al.(2) presented a multi-item multi period inventory control problem with all unit and/or incremented quantity discount polices under limited storage capacity. Pasandideh et al.(2) investigated the single vendor - single buyer supply chain , in which the vendor was responsible to manage the buyer's inventory .In this paper the main objective here is to find the fuzzy order quantity of the product and fuzzy total inventory cost is minimized.

2. METHODOLOGY

In this paper, we use Function Principle and Graded Mean Integration Representation method to find the optimal economic production quantity with a fuzzy inventory model. When the quantities are fuzzy numbers we need to use the Kuhn-Tucker conditions to solve the model. Therefore we introduce this three methodologies as following

2.1THE FUZZY ARITHMETICAL OPERATIONS UNDER FUNCTION PRINCIPLE

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MAKE IN INDIA POLICY ON TOURISM TOWARDS SUSTAINABLE DEVELOPMENT

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Abstract
The 15th and current Prime Minister of India "Mr.Narendra Damodardas MODI" on September 25th 2014 launched the MAKE IN INDIA which is a new national program designed to facilitate investment, foster innovation, enhance skill development, protect intellectual property and build best-in-class manufacturing infrastructure. In order to make India a better tourism industry, its infrastructure development and safety and security of the tourist will play a major role. Tourism plays a crucial role in the economic development of a country. It is a big foreign exchange earner. Tourism has credited with contributing a sustainable amount of foreign exchange. The tourism industry in India is substantial and vibrant and the country is fast becoming a major global destination. Today, tourism has become more inclusive of new concepts which require the support of the government to develop and flourish. There is a need to propagate these concepts with dedicated policies formed for the development of tourism. Effective implementation of the policies will help in the growth of the industry overall. The main objective of this paper is to highlight the Make in India policy on tourism towards sustainable development.

Keywords: Make In India, Tourism, Policy, Sustainable Development.

Introduction

Tourism is one economic sector in India that has the potential to grow at a high rate and ensure consequential development of the infrastructure at the destinations. It has the capacity to capitalize on the country's success in the services sector and provide sustainable models of growth. In India, the travel and tourism sector is estimated to create 78 jobs per million rupees of investment compared to 45 jobs in the manufacturing sector for similar investment. Along with construction, it is one of the largest sectors of service industry in India. Apart from providing employment to a wide spectrum of job seekers from the unskilled to the specialized, a higher proportion of tourism benefits (jobs, petty trade opportunities) accrue to women.

Research Objective: To study the Make in India policy on tourism towards sustainable development.

Research Method: The research design will be descriptive in nature. The method of data collection will be mainly based on secondary data such as journals, books and websites.

Limitations:

1. The study is based on published data and information. No primary data is being collected.
2. Time constraint remained the major limitation in the study.
3. The biasness can always be there.

Make In India: Tourism Sector

Summary

- 6.8% of India's GDP.
- USD 18.13 Billion in foreign exchange earnings.
- 1 Billion domestic travellers.
- 30 world heritage sites.
- 6.97 Million foreign tourists in 2012-13. 21 hotel management institutes.
- 78 jobs with every USD 1 Million invested.

Reasons to Invest

- Tourism in India accounts for 6.8% of the GDP and is the third largest foreign exchange earner for the country.
- India ranks 42nd in the United Nations World Tourism Organization rankings for foreign tourist arrivals.
- India registered 6.97 Million foreign tourist arrivals in 2013, registering an annual growth of 5.9% over the previous year.
- The foreign exchange earnings from tourism during 2013 were USD 18.13 Billion, registering an annual growth of 2.2% over the previous year.

Impact of Technology on Human Resource Management

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ABSTRACT

Technology has become an indispensable part of contemporary world while human resource management globally has equally being affected in a number of ways through its adoption and application. The impact of technology on Human Resource Management can be profound. Internet and intranet revolution have changed the way business is carried out worldwide. Consequently rapid technological change helps the key stakeholders in the growth and efficiency of the organisations in the long run. The present study focuses on how far technology impacts on different functions of human resource management.

Keywords: Human Resource Management, Technology.

INTRODUCTION

Technology has greatly altered the structure and operation of all industries. Use of technology is almost needed in every department. Human resource management has experienced unprecedented levels of change due to technology. The importance of HR has become too obvious because of complex and uncertain environment. Therefore, organizations need to bring more furtherance in HR department due to globalization, technological advancements and competition etc. Now firms are operating and expanding their business across the globe, and firms are facing diverse cultures, values, and behaviours of people, which they bring with themselves in the workplace.

When it comes to human resources, technology helps in all process from recruiting to retire functions. Technology has transformed the functions within the human resource department are being performed electronically to improve the administrative efficiency and responsiveness of human resource management to their internal clients, employees and managers. If it is well applied time and money can be saved and subsequently enhancing their efficiency.

REVIEW OF LITERATURE

Kamal, Ashish Kumar (2013) stated that Information Technology as a structural factor and instrument transforms architect of organizations, business processes and communication has increasingly integrated

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Factors Influencing Consumer Attitude towards Online Shopping

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ABSTRACT

E-Commerce has contributed unprecedentedly to India's economic growth in the recent years. The e-commerce in India is experiencing increased globalization, competition, mounting customer expectation and so on. In the growing business it is a vital role of the retailers to sustain the customers to boost the competitive advantage. The seller has to understand the need and identify the behavior of customers. Rapid growth in online shopping has changed the view of prospective customers in their attitude towards purchasing online. The present study aims to examine the attitude of customers and the factors that influence the customers towards online shopping.

INTRODUCTION

In the fast moving phase of life, everything at one click made the work easier and better. The revolution of e-commerce has made the work ease to prospective customers as well as retailers in carrying out the services in less time span. Social media with digitalization has made wide connectivity at a global level. It attracts and retains the potential customers towards online shopping. A marketer has to concentrate on the demographic environment such as age, gender, educational qualification and income levels, socio-cultural factors, psychological factors and personality factors; they are the major factors that impact the buying behavior and the attitude of the consumer. Technology and innovation in e-commerce drive changes predominantly in online shopping to help individual as well as marketer to formulate business efficiently and effectively.

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Post-Mergers and Acquisitions Performance of Select Indian Banks

I Babu Rathinam and P S Sridharan***

The present paper examines the impact of Mergers and Acquisitions (M&As) on the financial efficiency of selected banks in India. The post-M&A performance is measured using the ratio analysis. The main focus is on the overall profitability parameters, liquidity parameters, solvency parameters and overall efficiency parameters. We found significant change in the earnings of the shareholders; a little change in liquidity position; significant change in the long-term solvency position of the firms; and significant change in the overall efficiency of the banks during the post-merger period 2008-2013. The results of the study indicate that M&As in India have significant impact on the financial performance of banks and that the acquiring firms were able to generate value.

Introduction

Mergers and Acquisitions (M&As) in the banking sector have become familiar in a majority of the countries. A large number of international and domestic banks are engaged in M&A activities. With the help of M&As, banks can achieve significant growth in their operations and minimize their expenses to a considerable extent. Another important advantage is that in the process, competition is reduced (Aruna and Nirmala, 2013).

M&As are being used extensively as a tool for growth by firms across the globe. M&As offer inorganic route of growth for firms both within (domestic deals) and across (cross-border deals) the boundaries. The inclination towards mergers in banks worldwide is driven by intensifying competition, need for global size, need to reduce the costs, to take benefit of economies of scale, to expand business into new areas, to improve shareholders' value and to invest in technology. The heavy competition and survival in the global market has prompted the Indian companies to go for M&As as an important strategic choice. The trends of M&As in India have changed over the years. The last two decades have observed varied movements in the M&A activity in the Indian context with the largest number of deals being observed in 2007 in a span of 11 years between 1999 and 2009 (Kashiramka and Muralidhar Rao, 2013). This period of heightened M&A activity also corresponded with growing Indian economy and well performing financial markets including the Indian stock markets. The fact is that the amount and volume of M&A have touched greater levels, and M&As are important because these activities have significant implications for firm performance (Laamanen and Keil, 2008).

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CO-OPERATIVE BANKS CREDIT FOR AGRICULTURAL DEVELOPMENT IN TAMIL NADU

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ABSTRACT

The study is an attempt has been made to examine the performance of the co-operative credit to the agricultural development and also to analyse the impact of agricultural credit on agricultural area and yield. This study was based on secondary data and simple regression analysis was used to measure the impact of co-operative banks credit on agricultural production. The main findings of the study show that there is fluctuation in providing the co-operative banks credit to agricultural production. The result of regression analysis indicates the impact of credit facilities of co-operative banks on the area under all crops and agricultural yield were negative at 1 per cent level of significant. The study conclude that the co-operative banks should be organized to make it efficient and purposeful for delivering the best in terms of credit and credit should also monitor over actual utilization of loans by developing an effective supervisory mechanism.

Introduction

Agriculture forms the backbone of the Indian Economy and two thirds of the population depends on agriculture for their livelihood. Today agriculture and allied activities make the single largest contribution of Gross Domestic Product (GDP) accounting at 24.2 per cent of the total. This sector provides 65 per cent of employment to the country's total work force and also single largest private sector occupation. The contribution of agriculture sector has 14.7 per cent in the total exporting and provides raw materials to a large number of industries (textiles, silk, sugar, rice, floor mills, milk products, etc)[1]. Finance is an important sources of agricultural sector which ensure adequate

[1]K.L.Gupta and Harvinder Kaur, New Indian Economy and Reforms 2004

Determining the Factors Influencing the Online Channel Adoption Intent among Insurance Agents

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Abstract

The aim of this paper is to identify the factors that have an influence over the online channel adoption intent of the insurance agents on the basis of which a conceptual model can be developed and tested empirically. This study uses relevant variables from the existing literature and has also introduced new variables which will have an influence over the online channel adoption of the insurance agents. Nine factors had been identified through exploratory factor analysis and it's been found that training has been emerged as the most important factor of all the nine factors. Based on these factors a model can be developed to understand the interrelationships among the factors.

To

Keywords

Online channel, Insurance agents, Behavioral intention, Training, Factor analysis.

To

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Interaction of *Cyperus rotundus* Compounds and Curcumin with Agents Involved in Autoimmune Beta Cell Destruction

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Abstract

The study aimed at documenting the plant Cyperus rotundus cyperus which is used for the treatment of diabetes mellitus on being subjected to phytochemical screening and efficacy evaluation. The ethnobotanical information was collected to ascertain the systematics of the plant specimen. The plant extracts were investigated for the antidiabetic.

Keywords: *Herbs, Cyperus rotundus cyperus, antidiabetic activity*

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INTRODUCTION

Diabetes mellitus is broadly classified as Type 1 and Type 2. Type 1 diabetes (T1D) mellitus appears to result from an insidious immunologic destruction of pancreatic beta cells, is also known as insulin dependent diabetes mellitus. Type 2 is mostly due to insulin resistance and associated factors, and is also termed as non insulin dependent diabetes mellitus. T1D is usually a progressive autoimmune disease, as the beta cells are destroyed by the body's own immune system. It is not known as to how the cascade starts in the immune system, but evidence suggests that both a genetic predisposition and environmental factors, including a viral infection, are involved [1].

The cause for β cell destruction remained an enigma for years, but two discoveries in the 1970s provided the basis for our current thinking about the disease [2]. Primarily a strong linkage of Type 1 diabetes to the highly polymorphic HLA class II immune recognition molecules DR and, later, DQ located on chromosome 6 exists. Extensive studies have revealed a large number of high and low risk HLA alleles. The second discovery, providing direct evidence for autoimmunity, came by incubating sera from T1D patients with frozen tissue sections of normal blood group [3]. Diabetes mellitus is a chronic metabolic disorder of impaired carbohydrates, fat and protein metabolism. It is characterized by hyperglycaemia expressed as abnormal glucose value, which is due to insulin deficiency and or insulin resistance which results in decrease utilization of carbohydrate and excessive glucogenolysis and gluconeogenesis from amino acid and fatty acids. The literature records antiarthritic, antimigraine, anti thrombotic, anti inflammatory, hypolipidemic, hypocholesterolemic, anti nausea properties of *Cyperus rotundus* cyperus. Thus in the present study, an attempt was made to investigate the various phytochemicals present in the petroleum ether and ethanol extracts of the rhizomes of *Cyperus rotundus* cyperus and also the study has been under taken to corroborate the antidiabetic property of ethanolic extract of *Cyperus rotundus* cyperus's compound by docking in the light of GLIDE software. Herbal flavonoids are known to be potent antioxidants and thus prevent T1D in NOD mice [4]. This research explores the effect of immune modulators on the specific autoantigens and proteins that are involved in

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QUANTITATIVE ANALYSIS OF PHYSICOCHEMICAL PARAMETERS AND ESTIMATION OF TERPENOIDS IN THE FLOWER EXTRACT OF *BUTEA SUPERBA* (ROXB.)

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ABSTRACT

Butea superba Roxb. is an important medicinal plant in the family Fabaceae and commonly known as "Red Kwao Krua". In Tamil it is known as Kodimurukkan. The medicinal use of this plant parts like stem and tuber is believed to prevent erectile dysfunction and it possess antioxidant, antimicrobial and anticancer properties. People believed that it is a miracle herb. Hence this plant initiates the interest about of its potential medicinal applications. The present study aims to evaluate the physicochemical parameters and total terpenoid content in the flower extract of *Butea superba*. The results revealed that physicochemical parameters such as moisture content, pH, total ash, and acid-insoluble ash (10.278, 5.067, 0.727 and 2.569 % w/w), respectively were also analyzed. The total terpenoid content of the plant material is 107.823±0.105%.The inorganic trace elements were also analyzed.

Keywords: Red Kwao Krua, Fabaceae, Terpenoids, Total ash.

INTRODUCTION

Plant kingdom which provides by the basic necessity of food, clothes and shelter to the human beings. In Indian Ayurvedic system herbs have always been the principal form and presently they are becoming popular throughout the world. There is a widespread belief that green medicines are healthier and more harmless or safer than synthetic ones [1]. Plants have different chemicals in their roots, stem, leaves, flowers and fruits. Medicinal properties of plants are due to the active chemical constituents present in different parts of the plant [2]. Many plants have great nutritive value and some of them are also the major source of medicine which plays a vital role in the human history [3]. The secondary metabolites which include, organic substances like alkaloids, terpenoids and phenolic compounds [4] are known to be responsible for the therapeutic potential of the herbal plants [5]. Studies on the phyto-chemistry of plants have shown that aromatic and medicinal plants have a great source of diverse nutrient and non-nutrient molecules which act as antioxidants and antimicrobial agents [6].The inorganic compounds are essential in trace amounts to play an important role in nutrition, enzyme reaction and also in the metabolic processes [7]. Metals and minerals present in biological system play a significant role in the metabolism [8]. The terpenoids form a group of compounds, the majority of which occur in the plant kingdom, a few terpenoids have been obtained from other sources. More terpenes have been discovered as an efficacious compound in human disease therapy and prevention. Terpenoid compound have been used to treat cancer, malaria, inflammation and a variety of infectious diseases [9].

Butea superba Roxb. is a plant in the family Fabaceae and commonly known as "Red Kwao Krua" [10]. It has been focused on its therapeutic potential for the treatment of erectile dysfunction in males [11]. In aquaculture, this plant extract used as a natural synthetic hormone for mono-sex production have been documented [12, 13].

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QUALITATIVE AND QUANTITATIVE ANALYSIS OF THE SHELL WASTES OF A FRESH WATER CRAB, *OZIOTELPHUSA SENEX SENEX* AND ITS BIOCHEMICAL PROPERTIES

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ABSTRACT

Enormous amount of shell wastes are generated due to industrial processing of crabs and prawns. Natural means of shell degradation becomes slower due to large quantities of shell waste dumped in the lands or burning them cause major environmental issues. So it is essential and necessary to reduce, recycle and reuse these shell waste. The present study was conducted using the crab shell powder of two different sizes (0.2 mm and 0.4 mm) to verify the minerals, protein, lipid, chitin, chitosan, moisture and carotenoid content of male and female freshwater crab, *Oziotelphusa senex senex* by traditional chemical method slightly modified. The minerals and lipids was recorded to be high in female crab shell waste than that of male crab shell waste, whereas the proteins, chitin and chitosan was recorded to be highest in male crab shell waste than that of female crab shell waste of both the particle size. The moisture and carotenoid content was almost same for of all particle size of male and female crab shell powder. The statistical analysis (t-test) showed a significant difference between male and female crab shell waste. Some bioactive compounds present in this crude shell waste of a fresh water crab, *Oziotelphusa senex senex* had an antioxidant activity. The results of the present study confirmed that the crude male shell waste had highest antioxidant activity.

Key Words:- Chitin, Chitosan, Qualitative, Quantitative, Carotenoid, Antioxidant, *Oziotelphusa senex senex*.

INTRODUCTION

Environmental pollution is an innate outcome of anthropogenic activities that has a potential threat to human health to a greater height (Fereidoun *et.al.,* 2007). Industrialization and agriculture contributes extensive and various types of waste products, out of which industries contributes more waste that pollutes the environment (Sabahi *et al.,* 2009). The industries generate about 960 million tons wastes each year are in the form of organic chemicals, inorganic chemicals, primary iron and steel, plastics and resin manufacturing, stone, clay, glass and concrete, pulp and paper, food and kindred products (Gopakumar, 2002). Food processing industry generates huge amount of the waste that are biodegradable. These bio-wastes obtained from the sea food industries are either disposed in the open land or dumped in large quantities or incinerated (Arvanitoyannis *et al.,* 2007). All these process are of environmental concern because biodegradation becomes slower or it is cost effective. So it is essential to reduce, recycle and reuse these bio-wastes which increase the economy of the nation using clean technologies (Nair, 2004). Since the shell waste becomes a greater threat to the environment, it is of great interest to explore all essential components and isolate them and reuse it.

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PHYTOCHEMICAL INVESTIGATION OF THE FLOWER EXTRACTS *HYBANTHUS ENNEASPERMUS* (L.) F. MUELL

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ABSTRACT

Herbs have always been the principal form of medicine in India and presently they are becoming popular throughout the world. There is a widespread belief that green medicines are healthier and more harmless or safer than synthetic ones. The present study is aimed to investigate the phytochemicals present in the flower extracts of *Hybanthus enneaspermus.* Preliminary phytochemical screening was done using 5 different solvents. The ethanol extract showed high number of secondary metabolites and it was followed by acetone, water, petroleum ether and chloroform extracts. Hence ethanol extract was selected for further quantification study. Total phenol, flavonoid, alkaloid, steroid, saponin, terpenoid and tannin were quantified. Tannin content was found to be high when compared to other secondary metabolites.

Key Words: Flower extracts, phytochemicals, secondary metabolites, *Hybanthus.*

INTRODUCTION

Plant source has been useful to develop many medicinal products and drugs for millennia (Cragg and David, 2001). Medicinal plants containing phytochemical constituents are useful for mankind to cure various ailments (Okoli *et al*., 2009). The therapeutic value of the plant relies on chemical substances which generate a distinct physiological action on the human body. The most important of these bioactive constituents of plants are alkaloids, tannins, flavonoids, and phenolic compounds (Edeoga *et al*., 2005).

Hybanthus enneaspermus (L.) F. Muell belongs to violaceae family, popularly known as "Orithazh thamarai" in Tamil. The plant is an herbaceous weed, distributed in tropical and sub-tropical regions of the world and mostly found warmer parts of India (Dinesh *et al*., 2013). *Hybanthus enneaspermus* is a small erect herb in which the flowers are solitary, axillary and reddish purple.

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The flower has 5 sepals, which are unequal in size. The petals are 5; the lower petal has a long claw; it is saccate or spurred at the base. Stamens are five, free; some of the stamens are spurred at the base ovary.

Traditionally the plant is used to treat various diseases and several biological activities has been reported on various parts of the plant which possess aphrodisiac, anti-infertility activity (Narayanaswamy *et al*., 2007; Senthil Kumar and Vijay Kumar, 2012; Nathiya and SenthamilSelvi, 2013), anti-arthritic property (Tripathy *et al*., 2009), CNS activity (kar *et al*.,2010), cardioprotective activity (Radhika *et al*., 2011), anti-inflammatory (Tripathy *et al*., 2011), antioxidant effect (Deepikaand Premalashmi, 2011; Anand and Gokulakrishnan, 2012), antiulcer and anti-secretory (Sakthi *et al*., 2012), potent regulator for membrane bound mitochondria (Anand *et al*., 2012), *in vitro* aldose reductase activity (Patel *et al*., 2012), hypolipidemic activity (Satheeshkumar and Kottai, 2012), *in vitro* antifungal activity (Napoleon *et al*., 2012) antimicriobial (Vijaya Bharathi *et al*., 2012), anti-allergic and analgesic activity (Thamizhmozhi *et al*., 2013), glucose utilization capacity (Dinesh *et al*., 2013).

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IJP

IN VITRO EVALUATION OF FREE RADICAL SCAVENING ACTIVITY OF THE FLOWER *HYBANTHUS ENNEASPERMUS* (L.) F. MUELL. EXTRACT

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ABSTRACT

Using five different solvents the flower extracts of *H. enneaspermus* was analyzed for its antioxidant property. The results revealed that ethanolic extract showed highest antioxidant activity followed by acetone, water, petroleum ether and chloroform. Further the compounds present in the ethanolic extract were identified and quantified as flavonoids and phenols. The high antioxidant activity observed in the ethanolic extract of the flower of *Hybanthus enneaspermus* could be suggested for its use to replace synthetic drugs which are used against oxidative damage.

Key words: Free radicals, Antioxidants, *Hybanthus*.

INTRODUCTION

In recent past, there has been an increasing awareness of medicinal plants to mankind (Dahanukar *et al.,* 2000). As a result of physiological and biochemical processes in an organism the cells generates free radicals and other reactive oxygen species by-products resulting in oxidative damage to lipids, proteins and DNA. Therefore it causes many chronic diseases, such as cancer, diabetes, aging, and other degenerative diseases in humans (Oyedemi and Afolayan, 2011). Antioxidants, on the other hand, significantly prevent tissue damage that stimulates wound healing process (Fitzmaurice *et al*., 2011). There are available synthetic antioxidants like butylated hydroxy anisole (BHA), butylated hydroxy toluenes (BHT), tertiary butylated hydroquinone and Gallic acid esters, but have been suspected to cause or prompt negative health effects. Hence, strong restrictions have been placed on their application and there is a trend to substitute them with naturally occurring antioxidants. Plant are endowed with free radical scavenging molecules, such as vitamins, terpenoids, phenolic acids, lignins, flavonoids, tannins, alkaloids and other metabolites which are rich in free radical scavenging property reported by (Cai *et al*., 2003 and Sateeshkumar *et al*., 2011). The phytoantioxidant compounds are able to neutralize the excess ROS and prevention of many diseases such as atherosclerosis, cancer, cardiovascular and neurological diseases (Trumbeckaite *et al*., 2006 and Muselik *et al*., 2007).

Hybanthus enneaspermus (L.) F. Muell belongs to violaceae family known as "Orithazh thamarai" in Tamil which is distributed in tropical and sub-tropical region of the world (Kiritar and Basu, 1991; Anand and Gokulkrishnan, 2012). *Hybanthus enneaspermus* is a small erect herb in which the colour of the flowers are pink, auxiliary, solitary and zygomorphic (Retnam and De Brito, 2003). Traditionally the plant is used as an aphrodisiac and anti-infertility activity (Narayanaswamy *et al*., 2007; Senthil Kumar and Vijay Kumar, 2012; Nathiya and Senthamil Selvi, 2013), antiarthritic property (Tripathy *et al*., 2009), CNS activity (kar *et al*., 2010), cardioprotective activity (Radhika *et al*., 2011), anti-inflammatory (Tripathy *et al*., 2011), antioxidant effect (Deepika and Premalashmi, 2011; Anand and Gokulakrishnan, 2012), antiulcer and anti-secretory (Sakthi *et al*., 2012), potent regulator for membrane

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EVALUATION OF PHYTOCHEMICAL SCREENING AND ANTIOXIDANT ACTIVITY OF *BUTEA SUPERBA* ROXB. FLOWER EXTRACT

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ABSTRACT

Plants are the richest source of organic compounds, which are used for medicinal purposes. Herbal plants are the principal source of medicine in India during ancient and modern times. Nowadays it's almost becoming throughout the world. *Butea superba* commonly called as Red Kwao Krua was traditionally reported to possess antioxidant activities, aphrodisiac, estrogenic and antibacterial properties. Hence the present study was carried out to evaluate the phytochemical screening and antioxidant activity of *Butea superba* flower extracts dissolved in different solvents. The results of the phytochemical screening study showed that the highest number of phytochemicals in the acetone solvent extract followed by ethanol and aqueous. The antioxidant activity was found to be the highest in acetone solvent extract which was equivalent to standard Butylated hydroxyl toluene(BHT) followed by ethanol and aqueous solvent extract. Hence the phytochemicals present in *Butea superba* flower extract confirmed to possess antioxidant property.

Key Words: *Butea superba,* Phytochemicals, Antioxidant, Butylated hydroxyl toluene.

INTRODUCTION

Plants are the richest source of organic compounds, in which many of these plant parts have been used as traditional medicine (Faodun A, 2010). Natural remedy from various disorders and diseases are possible by consuming these herbal plant food items on daily basis (Pullaiah TS, 2001). Since allopathic drugs have lot of side effects people had changed to alternative medicine for therapy. Developing countries like India and China possess lot of traditional knowledge in various herbs and medicinal plants in treating various ailments (Kamboj VP, 2000). More over the standardization and quality control of these medicinal plants requires a different approach than the allopathic medicine that still remains exigent (Sharma AK *et al*., 2013).

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Medicinal plants possess certain phytochemical that plays an important role in free radical scavenging, antibacterial, and antihelmintic (Chu YH *et al*., 2000). The most important phytochemicals are flavonoids, alkaloids, phenolic groups, tannins, terpenoids etc (Dhandapani R *et al*., 2008).

Butea superba Roxb. is a plant in the family Fabaceae and commonly known as "Red Kwao Krua" is a large woody climber (Verma DM *et al*., 1993). The flowers are yellowish orange color, about 4-5 centimeters in length that blossom when the plant sheds its leaves. The Red Kwao Krua was traditionally reported to possess antioxidant activities, aphrodisiac, estrogenic and antibacterial properties. Since, this plant parts possess many of such activities mentioned above, it is interesting to verify the various phytochemicals and to evaluate the antioxidant activity of the flower's crude extract.

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PHYSICOCHEMICAL PROPERTIES AND PROFICIENT ACTIVITIES OF CHITIN AND CHITOSAN ISOLATED FROM THE SHELL WASTE OF A NATIVE FRESH WATER CRAB *OZIOTELPHUSA SENEX SENEX*

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ABSTRACT

Chitin and Chitosan are the two important bioactive compounds obtained from the shell waste of a native fresh water crab *Oziotelphusa senex senex* by the chemical method that involves demineralization (DM), deproteinization (DP), decolorization (DC) and deacetylation (DA). The present study was conducted to isolate, purify and determine the physicochemical characteristics of the chitin and chitosan and its proficient activities obtained by altering the sequence of the chemical process based on the time period and particle size under laboratory condition. Two different protocols (DMPAC, DMPA2C) were adopted for two different particle sizes of 0.2 mm and 0.4 mm. The physicochemical characteristics and the % of yield, total proteins, moisture, ash content and carotenoid of chitin and chitosan were estimated. The results showed a significant difference statistically in the yield, total proteins, moisture, ash content and carotenoid of chitin and chitosan in both male and female crabs. The results of the present study also confirmed that the bioactive molecules present in this chitosan (particle size 0.2mm) of a fresh water crab, *Oziotelphusa senex senex* had both antioxidant and antihypertensive activity.

Key Words:- Chitin and Chitosan,

INTRODUCTION

Shell wastes produced during shellfish processing are the source of some important bioactive compounds such as chitin, chitosan and astaxanthin. Chitin and chitosan are the most important nontoxic, biocompatible and biodegradable naturally occurring biopolymer (Ruiz – Herrera, 1978).

These bioactive compounds are found in abundance in invertebrates, fungi etc. but not found in higher plants and animals (Austin *et.al.,* 1981). Annual production of shell fishery is about 100 million pound in which 85 % of waste residue is discharged by dumping in land without pretreatment (Rout 2001).

Crustacean shells are treated with acid to dissolve calcium carbonate, followed by alkaline to solubilize proteins which are present in crustacean shells in high concentrations, followed by a decolorization step which is usually necessary to remove remaining pigments and to obtain a colorless product. These treatments are applied to each chitin source regardless of the nature of starting material. The residual protein and pigments needs to be removed for further utilization, especially for biomedical applications (Rinaudo, 2006). To keep the environment clean it is necessary to reduce, recycle and reuse of the wastes that represents a realistic approach of reutilization

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Research Article

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Calcium and Phosphorus metabolisms in pulmonary tuberculosis patient in Tamilnadu

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Abstract

The aim of the present study is to determine the prevalence of hypercalcemia, hypocalcemia, hypophosphatemia and hyperphosphatemia in newly diagnosed TB patients before and after six-month duration anti-TB treatment in India. Patients were required to attend the treatment facility daily during the first intensive phase (first 8 weeks) of chemotherapy and then 3 times weekly during the continuation phase. These suspected patient Blood samples were collected from seven groups. Blood samples were collected from the subjects of tuberculosis Hospital at Chennai for before treatment and after treatment variations, fasting blood samples were collected from 8 AM - 9 AM. Experiments were carried out as soon as possible. Serum was analyzed for calcium and phosphorus. Phosphorus TB incidence of the patients before treatment and after the end of six-month treatment was found to be low at levels 1.08 to 1.25 mg/dL, medium levels 2.0 to 4.0 mg/dL and high levels 7.5 to 12.84 mg/dL. Calcium TB incidence of the patients for before treatment and after the end of six-month treatment was found to be low at levels 2.0 to 4.0 mg/dL, medium levels 11.0 to 13.0 mg/dL and high levels 7.5 to 12.84 mg/dL. In the present study, mean serum calcium level is much in newly diagnosed patients as compared to after treatment group which became normal after completion of therapy. However, mean serum phosphorous level was much decreased and increased in newly diagnosed patients as compared to the control which came to normal levels after the anti-tubercular therapy. Our findings propose the probability that early intervention will help achieve calcium and phosphorus conversion and ultimately a successful treatment outcome.

Keywords: Tuberculosis, Calcium, Phosphorus and Multidrug Resistance

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Research article

INHIBITION OF CARBOXYL ESTERASE BY BIO-PESTICIDES IN THE CONTROL OF COTTON BOLL WORM *HELICOVERPA ARMIGERA* (HUBNER)

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ABSTRACT: The noctuid moth species *Helicoverpa armigera* Hubner (Lepidoptera) is a major pest of cotton and other crops causing extensive damages to other crops such as okra, bhindi. These pests have developed resistance to synthetic pesticides which is mainly attributed to detoxification enzymes such as carboxyl esterase. Molecular modeling approaches were used to find the binding affinity of bio-pesticides azadirachtin, plumbagin, pyridalyl and tagitinin C. We report here that the compounds plumbagin and tagitinin C to be potential bio-pesticides to control the menace of this pest.
Key words: Helicoverpa armigera. Carboxylesterase, bio-pesticides, Molecular Docking

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INTRODUCTION

Indian economy is agro-based economy and agriculture is the mainstay as it constitutes the backbone of the rural livelihood security system [1]. Cotton (*Gossypium hirsutum*) is one of the major contributors to the agricultural economy of India. India is second largest producer of cotton after China, though it has largest area under cultivation [2]. There are several reasons attributed to this problem. The most important being the pest attack. Cotton crop is severely attacked by number of pests [3]. There are near about 1326 insects and mites all over the world and about 200 in India have been recorded as pests of cotton [4]. But due various reasons the production of cotton is declining per year. Among them one of the most important factors is the pest invasion, there is huge down fall in the production scale. *H. armigera* is the most prevalent pest of cotton crop which yields a huge loss every year [5].

The cotton bollworm, corn earworm or Old World (African) bollworm, *Helicoverpa armigera* (Hubner), is a moth, the larvae of which feed on a wide range of plants, including many important cultivated crops. It is a major pest in cotton and one of the most polyphagous and cosmopolitan pest species [6]. When the bolls are damaged, some will fall off and others will fail to produce lint or produce lint of an inferior quality. During the last 50 years, worldwide use of synthetic insecticides to control insect pests has led to both insecticide resistance and environmental problems [7]. Members of the carboxylesterase and cytochrome P450 monooxygenase super families are prominent candidates to confer metabolic resistance to pyrethroid insecticides. Both carboxylesterases and P450 enzymes have been shown to be involved in pyrethroid resistance in Australian *Helicoverpa armigera*, the noctuid species possessing by far the most reported resistance cases worldwide [8]. Carboxyl esterases are an important class of detoxification enzymes involved in insecticide resistance in insects [9].

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REGULATION OF THE POPULATION OF HELICOVERPA ARMIGERA BY TARGETING THE OLFACTORY RECEPTORS.

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ABSTRACT: *Helicoverpa armigera* Hubner is one of the lethal pest of cotton causing severe economic damages. Olfactory receptors are known to facilitate the identification of hosts by the pests. Olfactory binding protein was targeted to inhibit the sensory process. Molecular modeling approaches were applied and it was found Rayania to have the best affinity to the Olfactory binding protein, inhibition of which can help farmers to control the population of this lethal pest.
Key words: Helicoverpa armigera, Olfactory Binding protein, Ryania, Rotenone & Bioinformatics.

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INTRODUCTION

Cotton (*Gossypium hirsutum*) is a major fibre crop of global importance and has high commercial value [1]. It is one of the most economically important plants of India and stands second for production after China, although it has its largest area under cultivation [2]. There are various reasons behind the deteriorating production per year. Most importantly attack of different type of pest every year causes a huge loss in the cotton yield. Among various insect pests *Helicoverpa armigera* is the most predominant one in cotton crop [3]. Noctuids of the genera Helicoverpa and Heliothis are important pests of the subsistence and cash crops in the New and Old World. In Europe, Africa, Asia, Australia and Oceania this species has a major economic importance [4].

Helicoverpa armigera (Hübner) is a highly polyphagous agricultural pest. Host species for H. armigera come from a broad spectrum of families and include important agricultural crops such as cotton, maize, chickpea, pigeonpea, sorghum, sunflower, soyabean and groundnuts [5]. Major yield loss to the Indian cotton (even up to 60%) is due to bollworm complex consisting of three genera of bollworms viz. Helicoverpa, Earias, and Pectinophora, commonly referred to as American bollworm, Spotted bollworm and Pink bollworm respectively [3].

Insect olfactory perception involves individual aspects such as the spotting of food, host, mate or prey, and group communication aspects such as aggregation and avoidance (intra specific or inter specific). Besides, the recognition of other signals around the habitat environment, which may evoke no behavioral responses, helps insects to distinguish, comprehend and estimate the overall situation [6]. Flying insect have to navigate in highly diluted and dispersed odor plumes as well as in the region with high odor concentrations when approaching the odor source. Insect olfactory sensory neuron expresses two main families of receptor proteins, the odorant receptor (OR) and gusatatory receptor (GR) proteins [7]. Ors form ligand gated ion channel s immediately activated by odorant binding to the receptor complex [8, 9]. ORs are controlled by intracellular signaling [10, 11]. OPB contribute to the sensitivity of the olfactory system by transporting odorant through the sensillar lymph. It has been reported in *Drosophilla melanogaster* that calmodulin has strong impact in odorant receptor producing a disturbance in periphery ,antennal lobes and in detection of sex pheromones. [12].

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Activity of *Turbinaria Ornata* (Turner) J. Agade Against Blue Tongue Virus (Btv)

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ABSTRACT:-A sensitive and accurate method was developed to test the efficacy of the aqueous extract of marine seaweed, Turbinaria ornata (Turner) J. Agardh against blue tongue virus using the 3-(4,5 dimethylthiazol-2-yl)-2,5-diphenyl tetrazolium bromide(MTT) method. The abundance of this algae on the shores during the month of November and no reports so far ,having antiviral activity in addition to this other solvent extracts were toxic to the cell line hence water was selected as the solvent for extraction. On the other hand dextran sulphate was used a positive control and the bioactive compounds efficacy was compared with it. The optical density of formazan was used to determine cell viability. The IC_{50} values of dextran sulphate and the extracts were found to be nearly similar to those obtained by the plaque reduction method.

key words:- *mtt, seaweed, bioactive, aqueous extract, formazan,IC50value ,dextran sulphate*.

I. INTRODUCTION

Plants yield many biomedically useful substances. Apart from land plants, the oceans have also served as a source of a large group of structurally unique natural products of pharmacological significance. Chemical investigations of many benthic marine algae have illustrated that these algae produce a wide variety of structurally unique and biologically active secondary metabolites. There are large numbers of viral pathogens for which no effective chemotherapy currently exists [(1)]. Uniformly accepted standards for *in vitro* susceptibility testing are not available for antiviral drugs. Therapeutic drug level monitoring, commonly available to clinicians for antibacterial therapy, is not a part of routine care because of lack of standardization, uncertain relationship to clinical response, toxicity and cost [(2).] Antiviral resistance is another critical aspect of clinical importance. Lastly, antiviral chemotherapy is a reality for only a segment of the world's population because of financial considerations. Hope for millions of individuals in developing world afflicted by severe viral infections, rests with vaccine development, as the practical considerations such as cost are a barrier for access to many currently available and future drugs. Antiviral drugs available in the market are very expensive and patients with frequent attacks can not afford the cost of long-term treatment. Further, the increased availability and use of antiviral drugs, however, has led to the emergence of drug-resistant viruses, especially in immuno-compromised hosts [(3).] For these reasons, the search for new, effective and inexpensive antiviral drugs from natural resources continues to go on. In the search for new antiviral agents, the antiviral activity of *Turbinaria ornata* (Turner) J. Agardh of Indian coastline was studied for its activity and the aqueous extract was tested. This paper also describes the inhibitory activity of dextran sulphate a standard agent against the viruses mainly RNA.

II. MATERIALS AND METHOD

Turbinaria ornata (Turner) J. Agardh of Phaeophyceae, Phaeophyta, was selected as the experimental algae ,was collected from the rocky shores of of Kanyakumari district (latitude 80° N), Tamil Nadu . The collection was made in the month of November ,authenticated by Dr. R.Thevanathan ,Presidency college, Chennai.

The extract was prepared by dissolving ten grams of the finely chopped experimental plant in 100.0 mL of double distilled, millipore filtered water and kept in a shaker. After 48 hrs, it was filtered through four layers of cheese cloth and the filtrate was freeze dried. From the stock solution. test solutions having varying concentrations of the extract residue was used for antiviral studies. BHK cell lines (Baby hamster kidney cell line) were used for the culture obtained from TANUVAS (Tamilnadu University of Veterinary and Animal Sciences), Chennai and maintained in MEM containing 5% foetal calf serum, kept in a walk-in incubator at 37°C. The estimated active antiviral concentrations were subjected to the MTT (3 - (4,5 dimethyl thiazol - 2yl) 2,5 - diphenyl tetrazolium bromide) assay.After estimating the minimal concentration having activity it was subjected to the dye, MTT (3 - (4,5 dimethyl thiazol - 2yl) 2,5 - diphenyl tetrazolium bromide) assay was performed to measure the cell viability and cytotoxicity [(4)] . The tetrazolium salt used in the assay is cleaved by mitochondrial dehydrogenase in viable cells yielding a purple product formazan. The production of formazan is proportional to the viable cell number and inversely proportional to the degree of cytotoxicity. This test is performed to prove the viability of the extract treated cells after subjection to virus and also to find out the

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Original Article

FOLIAR APPENDAGES AND PHYTOCHEMICAL CONSTITUENTS OF *LEUCOPHYLLUM FRUTESCENS* (Berl.) I.M. Johnst, (SCROPHULARIACEAE).

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Abstract

Leaf epidermal morphology of Leucophyllum was studied. A detailed pharmacognostical and phytochemical evaluation was done. The study revealed several interesting characters such as, the trichomes are 110-160µm in height. The lateral spines are 100 µm long the cells of main axis are15µ m in height and 20µm breadth .Stomata occur only on the abaxial leaf surface; anisocytic stomatal complex. Mesophyll with calcium oxalate crystals. Others to be mentioned are TPM (Transcurrent Palisade Mesophyll).Thus the above-mentioned leaf features are of great taxonomic significance. Preliminary phytochemical tests revealed presence of alkaloids, steroids,tannin,terpenoids and saponins.This genus is sometimes placed in the family Myoporaceae, hence the present study.

Key words: alkaloids,dendroid, epidermal, leaf,Leucophyllum,Mycobacterium tuberculosis,stomata,trichome.

INTRODUCTION

India is one of the mega diversity countries in the world and medicinal plants form the backbone of traditional systems of medicine in India, thousands of tribal communities still use folklore medicinal plants for the cure of various diseases. Indian medicinal plants have been studied for potential source of bioactive compounds . The great interest in the use and importance of medicinal plants in many countries has led to intensified efforts on the documentation of ethnomedical data of medicinal plants Dhar *et al*. (1968). Earlier there were a few or no synthetic medicine and species of higher plants were the main sources of medicines for the world Duke (1990). Medicinal plants are the rich source of novel drugs that forms the ingredients in traditional systems of medicine, modern medicines, nutraceuticals, food supplements, folk medicines, pharmaceutical intermediates, bioactive principles and lead compounds in synthetic drugs Ncube *et al*. (2008) Many plants synthesize substances that are useful to the maintenance of health in humans and animals. The experimental plant *Leucophyllum frutescens* (Scrophulariaceae) is given for dysentery, fever, cough, asthma, liver injury, cataracts. The flowers and leaves can be brewed into a pleasant herbal tea which is amild sedative and good for treating flu and colds, the leaves of *Leucophyllum frutescens* have been used for antihepatotoxicity (Balderas-Renteria et al., 2007). Active fractions obtained from Leucophyllum frutescens (Berl.) I. M. Johnst. led to isolation of a new compound with moderate activity against all Mycobacterium tuberculosis strain(anti-TB active) Gloria *et al*.(2011). Hence the present investigation was undertaken.

MATERIALS AND METHOD

The whole plant was collected from Ethiraj College campus, Chennai of Tamilnadu, India identified by botanist of CSMDRIA Chennai,Tamil Nadu. Fresh hand sections were taken and treated with chloral hydrate and phloroglucinol and HCl .Microscopical characters were studied as given by Evans Trease and Evans (1997). Trichomes were studied in epidermal peels of plant parts such as lamina .The material was first soaked in the warm water in order to soften the tissues. The peelings were removed with the help of razor and then stained with dilute solution of saffranin and mounted in 50% glycerine. Epidermal tissues were studied from paradermal sections of lamina in surface view. Microphotographs were taken with the help of Nikon (ECLIPSE E400) research microscope.250g air-dried powder of the leaf was subjected to 250ml of distilled water, butanol, methanol, chloroform, hexane and ethyl acetate in soxhlet extraction for 8 hours (35-55°C)respectively. The six extracts were concentrated to dryness in a flask evaporator under reduced pressure and controlled temperature (50-60°C) to yield crude residue.The extracts were filtered through Whatman No. 1 filter paper and then concentrated in a vacuum at 40°C using a rotary evaporator. Each extract was transferred to

Micromorphological and phytochemical studies of *Tubinaria ornata* (Turner) J. Agardh thallus (phaeophyceae)

Poonam Sethi

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Abstract: Thallus of Turbinaria a marine alga belonging to Phaeophyceae was studied and detailed micromorphological and phytochemical evaluation was done. Morphology of the thallus has been studied to aid pharmacognostic and phytochemical evidences to aid in taxonomic species identification. Parameters presented in this paper may be proposed to establish the authenticity of this plant and can possibly help to differentiate the alga from its other species. The study revealed several interesting characters like funnel shaped terminal bodies and its cellular details. All the essential amino acids were present but isoleucine and asparagine occurred in huge amounts. Vitamin B6 formed the major part in addition to Vitamin B2 and Vitamin B1. The algae is a rich source of palmitic acid.

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Key words: alga, marine, micromorphological, phaeophyceae, phytochemistry, Turbinaria

1.Introduction

India is one of the mega diversity countries in the world and medicinal plants form the backbone of traditional systems of medicine in India, thousands of tribal communities still use folklore medicinal plants for the cure of various diseases. Indian medicinal plants have been studied for potential source of bioactive compounds. The great interest in the use and importance of medicinal plants in many countries has led to intensified efforts on the documentation of ethnomedical data of medicinal plants (Dhar et al., 1968). The recent increase in compounds isolated from land plants, has open doors to the poorly exploited marine ecosystem which appears to be a good candidate of natural resource (Baker, 1984). The aquatic ecosystem covers about 70 % of the earth's surface and India has a vast coastline of 6100 km supporting a rich flora of marine plants such as seaweeds, mangroves and sea grasses (Chapman & Chapman, 1980). Marine algae exhibit interesting nutritional properties in addition to their ecological properties. The results of the study suggest that the algae which are abundantly available in this ecosystem also have considerable potential of carbohydrates, amino acids, proteins, phenols and lipids for their use as food and pharmaceutical industry as a source in preparation of nutrient supplements, medicine and fine chemical synthesis.

2. Materials and method

i) Collection of specimens

The plant specimen for the proposed study was collected from Rameswaram, Tamil Nadu, India during the month of March During this period the experimental algae were usually in the saprophytic phase. The collection contained juveniles and few gametophytic thalli. Authenticated by Dr. R. Thevanathan, Presidency College, Chennai. Care was taken to select healthy plants and normal organs. The required samples of different organs were cut and removed from the plant and fixed in FAA. After 24 hrs of fixing, the specimens were dehydrated with graded series of tertiary –Butyl alcohol as per the schedule given by (Sass, 1940). Infiltration of the specimens was carried by gradual addition of paraffin wax (melting point 58-60 C) until TBA solution attained super saturation. The specimens were cast into paraffin blocks.

ii) Sectioning

The paraffin embedded specimens were sectioned with the help of Rotary Microtome. The thickness of the sections was 10-12 µm. Dewaxing of the sections was by customary procedure (Johansen, 1940). The sections were stained with Toluidine blue as per the method published by (O Brien, 1964). Since Toluidine blue is a polychromatic stain. The staining results were remarkably good; and some cytochemical reactions were also obtained. The dye rendered pink colour to the cellulose walls, blue to the lignified cells, dark green to suberin, violet to the mucilage, blue to the protein bodies.

iii) Photomicrographs

Microscopic descriptions of tissues are supplemented with micrographs wherever necessary. Photographs of different magnifications were taken with Nikon Lab Photo 2 microscopic Unit. For normal observations bright field was used. Magnifications of the figures are indicated by the scale-bars.

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Abstract

Thallus of Turbinaria a marine alga belonging to Phaeophyceae was studied and detailed micromorphological evaluation was done. Morphology of the thallus has been studied to aid pharmacognostic and taxonomic species identification using photographs; parameters presented in this paper may be proposed to establish the authenticity of this plant and can possibly help differentiate the alga from its other species. The study revealed several interesting characters like funnel shaped terminal bodies and its cellular details.

Subject Areas

Taxonomy

Keywords

Alga, Anatomy, Marine, Micromorphological, Phaeophyceae, Tissue, Turbinaria

1. Introduction

India is one of the mega diversity countries in the world and medicinal plants form the backbone of traditional systems of medicine in India; thousands of tribal communities still use folklore medicinal plants for the cure of various diseases. Indian medicinal plants have been studied for potential source of bioactive compounds. The great interest in the use and importance of medicinal plants in many countries has led to intensified efforts on the documentation of ethnomedical data of medicinal plants [1]. The recent increase in compounds isolated from land plants, has open doors to the poorly exploited marine ecosystem which appears to be a good candidate of natural resource [2]. The aquatic ecosystem covers about 70% of the earth's surface and India has a vast coastline of

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ASSESSMENT OF GENETIC DIVERSITY OF TRIGONELLA FOENUM-GRACEUM L. IN NORTHERN INDIA USING RAPD AND ISSR MARKERS

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ABSTRACT

Objective: The main aim of this study was to assess genetic diversity and phylogenetic relationships of different varieties of fenugreek (8 varieties and 6 populations) collected from northern India using RAPD (Random Amplified Polymorphic DNA) and ISSR (Inter Simple Sequence Repeat markers).

Methods:DNA Samples were analyzed with 400 RAPD and 100 ISSR primers. For statistical analysis data were subjected to UPGMA (Un weighted pair-group method with arithmetic averages), Jaccard's similarity coefficient values were obtained using Similarity for Qualitative Data (SIMQUAL), to find out genetic relationship. This analysis generated dendrogram which was further compared using the Mantel matrix correspondence test (NTSyS-pc version 2.02i) and Principal coordinates analysis.

Results: Polymorphism frequency of 42.91% and 55.66% was found in different varieties of fenugreek using RAPD and ISSR markers respectively. Based on the combined data of RAPD+ISSR marker system the maximum similarity index was observed for accessions from Mathura and RMT-143 (0.85) whereas the minimum similarity index was observed for RMT-351 sand RMT-303 (0.26).

Conclusion: The investigation has demonstrated that cluster analysis could be profitably used in unravelling the genetic variation within the accessions and the two molecular markers, RAPD and ISSR could be used as effective tools to evaluate genetic diversity and assess genetic relationship in fenugreek.

Keywords: Genetic diversity, ISSR, Polymorphism, RAPD, *Trigonella foenum-graecum* L.

INTRODUCTION

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GREEN MARKETING – CHALLENGES AND OPPORTUNITIES

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Meaning and Definition

Green marketing is the process of developing products and services and promoting them to satisfy the customers who prefer products of good quality, performance and convenience at affordable cost, which at the same time do not have a detrimental impact on the environment. Green marketing is the marketing of products that are presumed to be environmentally preferable to others.

As per Mr. J. Polonsky, Green Marketing can be defined as, "All activities designed to generate and facilitate any exchange intended to satisfy human needs or wants such that satisfying of their needs and wants occur with minimal detrimental input on the national environment." Green marketing is also called environmental marketing/ecological marketing.

According to the American Marketing Association, "Green marketing is the marketing of products that are presumed to be environmentally safe, involves developing and promoting products and services that satisfy customer's want and need for Quality, Performance, Affordable Pricing and Convenience without having a detrimental input on the environment" Green marketing also ties closely with issues of industrial ecology and environmental sustainability such as extended producers liability, life-cycle analysis, material use and resource flows, and eco-efficiency".

According to Charter (1992), Green Marketing is defined as 'greener marketing is a holistic and responsible strategic management process that identified, anticipates, satisfies and fulfill stakeholder needs, for reasonable reward, that does not adversely affect human or natural environmental well being'.

Ken Peattie (1999) defined environmental marketing in terms of customer satisfaction in a sustainable fashion which refers as 'the holistic management process responsible for identifying, anticipating, and satisfying the requirements of the consumers and society, in a profitable and sustainable way'.

Evolution

The term Green Marketing came into prominence in the late 1980s and early 1990s. The American Marketing Association (AMA) held the first workshop on "Ecological Marketing" in 1975.[6] The proceedings of this workshop resulted in one of the first books on green marketing entitled "Ecological Marketing". In order to meet stricter environmental standards, both marketers and consumers are becoming increasingly sensitive to the need for switch in to green products and services. As a result, green marketing has emerged which speaks for growing market for sustainable and socially responsible products and services.

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Role and Significance of Credit Rating with Special Reference to Indian Retail Equity Investor: An Empirical Investigation

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Abstract

Credit rating provides analytical assistance to the potential investors on the extent of risk involved in the appropriate repayment of principal and interest. Credit rating is a basis of reliable information for many users as rated instruments highlight the company's financial health. Rating gives advanced information about the rated product at low cost to the investor. This study highlights as to how the retail equity investors could enhance their participation in the stock market by relying on the information dished out by the credit rating agencies. The methodology of the study is based on primary data collected through well-structured questionnaire to elicit the perception of retail investors on the usefulness of credit rating. Factor analysis by principal component method, has been applied to reduce the number of usage related variables among the retail equity investor into four meaningful factors and benefit of ratings related variables into three meaningful factors. Multiple regression analysis has been employed to establish the influence of

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Enhancing Quality of Service in Unified Communications using Dynamic CODECs

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Abstract-Unified Communication refers to all forms of communications that are exchanged via the medium of the TCP/IP network to include other forms of communications such as Internet Protocol Television (IPTV) and Digital Communications. The major objective of unified communication is providing flawless communication. The telephone provides the feasibility of cutting short the distance and minimizing access time so that people can communicate in real time or near real time when they are not together. Also UC provides us the use variety of devices to communicate such as wireless phones, personal digital assistants, personal computers etc. The objective of this paper would be creating higher-quality digital media voice and video content by using dynamic Codecs at the router so that people using different modes of communication, different media, and different devices can still communicate to anyone, anywhere, at any time with enhanced quality of data.

Key Terms: UC, Codec, Mean Opinion Score, Jitter.

I. INTRODUCTION

Unified communications is an evolving set of technologies that unifies human and device communications in a common context and experience. It optimizes business processes and enhances human communications by reducing latency, managing flows, and eliminating device and media dependencies. It combines real-time communication services such as instant messaging (chat), presence information, telephony, video conferencing, data sharing, call control and speech recognition.

II. CHARACTERISTICS OF VIDEO AND VOICE QUALITY IN UNIFIED COMMUNICATION

Video quality per bitrates:
Commonly video quality is measured as the main characteristic of codec comparisons. Apart from this the speed rate at which the data is compressed /decompressed, the profiles, options, resolutions rate control strategies supported by these Codecs are the performance charactertics.

PEVQ (Perceptual Evaluation of Video Quality) :
The picture quality of a video presentation is measured by an end-to-end (E2E) measurement algorithm which refers 5.0 value for mean opinion score (MOS). This algorithm can be applied to evaluate the video generated by a digital video encoding/decoding process.

III. CODECS

The successful integration of all these services mainly lies on the Quality. The quality in terms of voice and video can be achieved by using the different types of codecs (compression and decompression) dynamically. A codec is an algorithm, which contains a list of instructions that identifies the method used to compress data into fewer bytes. By following these instructions, applications such as encoders and players can reliably compress and decompress data. In the case of digital media content, video codec software provides encoding and decoding which may or may not include the use of video compression and/or decompression for digital video and they are used to decrease the content's file size and bit rate.

Bit rate is the amount of data per second that is required to render audio and video content. By using Codecs, the file size can be reduced to maximum possible and bit rates can alsobe reduced. Hence digital media files can be stored and streamed over a network more quickly and easily. With lossless compression, the original data will be retained after the file is decompressed and lossy compression resizes the file by truncating redundant information. While data is getting compressed using lossy data compression, the quality measurement issues become important to ensure that the required quality in that data is not lost. The primary goal for most methods of compressing video files is to fabricate video files that are most closely approximates the original source file and simultaneously deliver the smallest file size possible. The following are the list of famous Codecs used.

- AMR Codec
- Broad Voice Codec 16Kbps narrowband, and 32Kbps wideband
- DoD CELP - 4.8 Kbps
- GIPS Family - 13.3 Kbps and up
- GSM - 3 Kbps (full rate), 20ms frame size
- iLBC -15Kbps,20ms frame size: 13.3 Kbps, 30ms frame size
- ITU G.711 - 64 Kbps, sample-based Comes in two flavors: A-law and mu-law
- ITU G.722 - 48/56/64 Kbps ADPCM 7Khz audio bandwidth
- ITU G.722.1 - 24/32 Kbps 7Khz audio bandwidth (based on Polycom's SIREN codec)

G-729 and **G-711** are the examples of major Codecs are generally used for obtaining high quality of call and video data transmission at the run time. Also G-729 is lighter software and used for packets which requires low compression. G-711 is the tougher software used for high compression required

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Significant of Big Data in various fields

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Abstract

Big data is becoming a upcoming era or field. Big data means handling very large set of data which includes structured, semi-structured and unstructured data. Currently big data is most preferred in various fields like, finance, Retail industry, healthcare, insurance, socio-business intelligence, in digital oil field, cloud computing, banking, marketing data mining, etc. This paper will elucidate applications of these fields.

Keywords: Big data, Big data analytics, Big data applications, big data mining, banking, marketing

INTRODUCTION

Big data is a big game changer in the future because everything is based on data and information. According to Wikipedia[1] the Big data means that "Big data is the term for a collection of data sets so large and complex that it becomes difficult to process using on hand database management tools or traditional data processing applications." So we are circumstances to manage huge set of data which comes from social medium podium, online digital media, financial systems, insurance, healthcare, and transportation and telecommunication companies. Big data is united with 3V's Volume, Variety and Velocity.(Alternatively referred as V3). Volume: It states that amount or quantity of data. IDC's study for big data predict that from 2009 to 2020 digital data will breed 44 fold to 35ZB per year. The collection of this data will be both structured, semi-structured and unstructured data. IBM also explores more that $2.5*10^8$ of data per day i.e 2.5 quintillion bytes of data. Popular social media website facebook alone create more than 500 TB of data every day. Google create 1 petabyte of data for every hour. Velocity: The rate at which the data is created. More than80% of collected data will be unstructured data. The digital data is doubling every 2 years. Variety: It states that different types of data. i.e. The data which is coming from social-media data, sensor data, images, videos, etc. Big data has two more magnitudes Variability that is incompatible data flows with periodic peaks. Complexity means the need to correlate and share data across entities.

DEMAND OF BIG DATA

A research done by NASSCOM and CRISIL Global Research & Analytics [2] research emphasis five important insights about Big Data. 1. Big data will become all-encompassing with the effort to develop

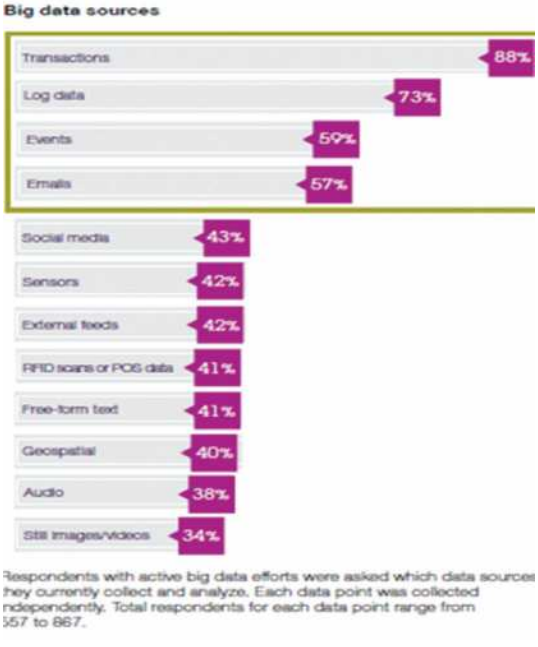

Fig 1. Big data sources

noteworthy benefits for most of the sectors. 2. Data Analytics have immense opportunities, globally. Big data market globally reach US$25 billion by 2015 from US$5.3 billion in 2011 a CAGR of 45 per cent. NASSCOM President says that "Big Data will grow exponentially over the next three years. Our study reveals that 90 per cent of Fortune 500 companies are likely to have Big Data initiatives underway by year-end. Already, new Big Data companies are attracting funding in excess of USD50 million. Currently, North America and Europe account for a substantial portion of the global demand potential for Big Data analytics." 3. CRISIL CEO expects that India will placed a influence this opportunity in IT and analytics field. The Indian big data field raise five-fold from the current level of US $ 200 million and touch US$1 billion by 2015. The opportunity for Indian service providers lies in offering services around Big

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The growth of Women Entrepreneurship with reference to Tamil Nadu District – A Conceptual View

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ABSTRACT

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SECTION

Articles

ABSTRACT

Although, there has been a steady increase in the number of women professionals over the past 20 years, most mainstream press coverage continues to rely on men as experts in the fields of business, politics and economics. Women in the news are more likely to be featured in stories about accidents, natural disasters, or domestic violence than in stories about their professional abilities or expertise. According to Government of India "A women enterprise is an enterprise owned and controlled by a woman and having minimum financial interest of 51 percent of capital and giving at least 51 percent of employment generated in the enterprise to woman. In 2000, the Association of Women Journalists (Association des femmes journalists – AFJ) studied news coverage of women and women's issues in 70 countries. It reported that only 18 per cent of stories quote women, and that the number of women-related stories came to barely 10 per cent of total news coverage. Women in India consistently lag behind the men in terms of access to education, health care, jobs etc. Apart from the economic and social inequality, women in India are victims of heinous crimes such as dowry deaths, rape, molestation and immoral trafficking. As per the latest statistics; the female child sex ratio (0-6 years) is 914 per 1000 males' .Rural female literacy rate only 58 percent, while rural male accounts for 78 percent. It is to be noted that women employment in urban areas is only 13.9 percent while in rural areas is 29.9 percent. With the rise in poverty, many women are forced to work in very low end and low paid jobs. Employment of women in organized sector is less than 8 percent. Women especially in the child bearing age often deficient in nutrition due to poverty. As a result the number of maternal deaths in India is one of the highest in the world and 87 percent of all pregnant women in India are anemic. Women in recent years have cast their spell in different walks of life and have withstand challenges of time touching the pinnacle of success, despite the social, psychological and economic barriers. This has been made possible by the educational and political awakening, modernization and urbanization, legal safeguards and social reforms. Women today are aware of the burden of their work and role, both literal and figurative. This awareness has resulted in a resistance to the perception of the female self as adaptable and flexible. The role and work of women are intimately related to the goal of comprehensive socioeconomic, political and cultural development of all societies and the quality of life on our planet. In general, contemporary

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A Review of Enhanced and Secure Ontology Learning Approaches

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***Abstract*—** The issue that Ontology learning bargains with is the learning obtaining bottleneck, that is to say the trouble to really show the learning significant to the area of interest. Ontologies are the vehicle by which we can show also, share the learning among diverse applications in a particular domain. So numerous relook created several Ontology learning approaches also, systems. In this paper, we introduce a review for the diverse approaches in Ontology learning from semi-organized also, unorganized date

***Keywords*—**Ontology learning approaches, Ontology learning, Ontology learning evaluation, learning discovery.

I. INTRODUCTION

The World Wide Web is a vast also, growing source of information also, services which require to be shared by individuals also, applications. Ontologies play a major part in supporting the information trade also, sharing by extending syntactic interoperability of the Web to semantic interoperability. Ontologies give a shared also, a normal understanding of a area that can be communicated between individuals also, heterogeneous also, distributed frameworks. Also, semantic web also, its applications depend heavily on formal ontologies to structure Information for comprehensive also, transportable machine understanding. Thus, the Semantic Web‟s victory is subordinate on the quality of its underline ontologies. For reaching the goal of a semantic web, web resources require to be annotated with semantic information. Each of the user's needs its suitable ontologies that give the essential semantic instruments to construct the semantic web. Fabricating such ontologies is not a new problem, learning engineer's faces it in gaining learning to develop knowledge-based systems.

Ontology can be regarded as a vocabulary of terms also, connections between those terms in a given domain. Examples of ontologies are WorldNet Ontology, AGROVOC also, others. In other words, ontologies are meta-Information schemas, providing a controlled vocabulary of concepts, each with an explicitly characterized also, machine process-able semantics. By defining shared also, normal area theories, ontologies help both individuals also, machines to communicate also, support the trade of semantics also, not only syntax. The cheap also, fast development of area particular ontologies is essential for the victory also, the proliferation of the Semantic Web. The learning captured in ontologies can be utilized to annotate web pages, specialize or generalize concepts, drive intelligent look motor by utilizing the connection between ideas existing in ontology.

In viable terms, an Ontology may be characterized as O = (C, R, A, Top), in which C is the non-empty set of concepts, R is the set of all statements in which two or more ideas are related to each other, A is the set of axioms also, Best is the highest-level Idea in the hierarchy. R itself is divided to two subsets, H also, N. H is the set of all statements in which the connection is a taxonomic connection also, N is the set of all statements in which the connection is a non-taxonomic relation. There may too be bidirectional functions that relate the individuals of C also, their motivating components in the real world.

The remainder of this paper is organized as follows. In area 2 a brief description for Ontology learning is presented. The unorganized also, semi-organized Ontology learning approaches will be discussed in sections 3 also, 4. Area 5 introduces the systems for Assessing the ontologies fabricated naturally or semi-automatically. Finally, concluding remarks are given in area 6.

II. ONTOLOGY LEARNING APPROACHES

Manual obtaining of ontologies is a monotonous also, cumbersome task. It requires an extended learning of a area also, in most cases the result could be incomplete or inaccurate. Physically fabricated ontologies are expensive, tedious, error-prone, biased towards their developer, inflexible also, particular to the reason that motivated their construction.

Researchers attempt to overcome these disadvantages of manual Fabricating Ontology by Utilizing self-loader or programmed systems for fabricating the ontology. Automation of Ontology development not only reduces

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Enhanced and Secure Electrical Health Record Retrieval Protocol

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Abstract— As the use of Electronic Medical Records (EMRs) becomes more widespread, so does the need to look and give viable information disclosure on them. Information disclosure strategies will permit experts and other healthcare stakeholders to find significant pieces of information in the growing corpus of accessible EMRs. The victory of Web look motors has appeared that keyword questions are a valuable device for locating significant information in an instinctive and viable manner. However, questions emerge of the form: What are the semantics of keyword questions on EMRs? What is a vital result? What is the role of medical and clinical ontologies and Lexicons like SNOMED (Systematized Classification of Human and Veterinary Medicine) in answering such queries? In this position paper we introduce the issue of keyword-based information disclosure on EMRs and enumerate the salient challenges that must be addressed to encourage quality information discovery. The objective is to make interest in new medical information administration relook initiatives, and conceivably make new paradigms for utilizing medical data. The primary center of the paper is the newest XML-based EMR standard created by the Health Level Seven (HL7) group, the Clinical Archive Engineering (CDA) Release 2.0, although the same issues emerge for any other standard hierarchical format.

Keywords— Electronic Health Records, Health Information Technology, Information Integrity, EMR Technology.

I. INTRODUCTION

The National Health Information Network (NHIN) and its data-sharing building blocks, RHIOs (Regional Health Information Organizations), are encouraging the widespread reception of Electronic Medical Records (EMR) for all hospitals inside the next five years. To date, there has been little or no effort to characterize strategies or approaches to rapidly look such archives and return vital results. One of the most promising models for EMR The definition and reception of this standard presents new challenges to related computer science disciplines like information management, information mining and information retrieval. In this position paper we study the issue of facilitating information disclosure on a corpus of CDA documents, i.e., given a question (query) and a set of CDA EMRs, find the substances (regularly subtrees) that are "good" for the query, and rank them according to their "goodness" with respect to the query. The victory of Web look motors has appeared that keyword questions are a valuable and instinctive information disclosure approach. Therefore, we mainly center on keyword questions in this paper, although some issues going beyond plain keyword questions are moreover examined.

As an example, consider the usual situation where a specialist wants to check conceivable conflicts between two drugs. Keyword question "drug-A drug-B death" could be submitted to discover cases where a patient who took both drugs died. Note that the word "death" can be indicated in many diverse parts of a CDA document, and moreover synonyms or related terms like "mortality" can be used instead. The latter can be tackled by leveraging fitting medical ontologies like SNOMED Clinical Terminology (SNOMED CT) as discussed below.

The key positioning criteria found in current systems as well as the bibliography are (a) relevance, (b) quality (authority) and (c) specificity. It is testing to characterize the information disclosure semantics for CDA archives such that the three aforementioned key positioning criteria are considered, given the hierarchical structure and particular semantics of CDA, and the fundamental references to outside substances like dictionaries, ontologies, separate text, or multimedia patient data. Medical Lexicons and ontologies regularly used in CDA are SNOMED CT and LOINC. We moreover study how past work on information disclosure on XML information (Area 2.2) can be leveraged, and what limitations might exist in this unique domain. We note that our study does not discuss the vital privacy issues involved in accessing patient information, as required by HIPAA.

The broadened variant of this work describes more challenges and discusses more related work. The rest of this paper is organized as follows: Area 2 presents a background exposition of current clinical information models and a brief survey on information disclosure on XML data. Area 3 addresses the challenges that we have recognized to execute information disclosure on a corpus of EMR documents. Our concluding remarks are displayed in Area 4.

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An Empirical Study on Satisfaction Level of Employee Welfare Measures With Reference to Selected Manufacturing Companies in Bangalore

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Bangalore

ABSTRACT

Welfare economics is a branch of economics that focuses on the optimal allocation of resources and goods and its impact on social welfare. Employee welfare measures are an important factor for any organization to enhance productivity and efficiency. These welfare measures and their respective satisfaction level keep an employee highly motivated and committed to work. As these goals are difficult to be realized by individuals alone, the Government came into the picture through their legal powers by enacting laws and monitoring them. Generally, welfare schemes can be classified into two categories viz. Intra-mural and Extra-Mural. The Intra-Mural schemes are those schemes that are compulsory to provide by an organization to employee health and safety through mandatory legal laws and extra-mural schemes differ from organisation to organisation. The revival of manufacturing sector through Make in India concept is making an epoch in Indian history. In this context, an attempt has been made to study the satisfaction level of employee welfare measures (based on Welfare measures of Factories Act, 1948) with reference to selected manufacturing companies in Bangalore. Primary data was collected through a well-designed structured questionnaire. Percentage analysis, factor analysis, t test, F test and General Linear Model (GLM) statistical techniques were applied to identify the satisfaction level of the selected employees.

Key words: Welfare Economics, Intra – mural, factories act, employee welfare, employee satisfaction level, Make in India

INTRODUCTION

Employee welfare is an important dimension of Industrial Relations. The term "Employee Welfare" is a broad area which covers both intra-mural and extra-mural aspects. The intra-mural schemes are those schemes which include monitoring the working conditions, formation of industrial harmony through infrastructure for health and insulating them by insuring the employees against occupational hazards. Extra mural measures include recreational, educational and accommodation facilities. Employee welfare measures can be both monetary and non-monetary in nature. The welfare measures yield loyal, committed and productive employees for a long time by boosting the morale of employees.

REVIEW OF LITERATURE

Nanda and Panda (2013) studied the welfare activities implemented by Rourkela Steel plant. Medical allowance, recreational facility, housing and transportation facilities were few welfare activities which distinguishes Rourkela from other companies. The departments are also cleanly maintained which improved the morale level of the employees.

André,C., et al. (2013), assert that welfare of the employees are hampered by skill deficiency and low education. Vocational training needs to be strengthened and cooperation with employers reinforced.

Usha Tiwari (2014) emphasizes that effectiveness, efficiency and

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TRAIT EMOTIONAL INTELLIGENCE'S LINK TO ORGANISATIONAL COMMITMENT – A SYMBOLIC REGRESSION APPROACH

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ABSTRACT:

*The Organisational Commitment and Trait Emotional Intelligence (TEI) score of 480 Fast Moving Consumer Goods executives in Chennai were obtained through Meyer and Allen three component Organisational Commitment questionnaires and Trait Emotional Short Form questionnaire. A Structural Equation Modelling was done to ascertain that link between the components were significant (affective<- tei, Critical Ratio = 4.88 , P < 0.001). To derive formula between TEI and Affective Organisational Commitment, Symbolic Regression analysis was done. It was found that Affective Commitment can be derived from Total TEI score (tot_tei) with the formula affective = 1.173*tot_tei + 0.6257/tot_tei.*

Keywords: *Symbolic Regression, Trait Emotional Intelligence, Organisation Commitment, Structural Equation Modelling*

1. INTRODUCTION:

Every company has long term plans – be it expansion in new geographical area, new markets, new product introduction, starting new product line or mergers and acquisition. The plans can be implemented properly only when the employee in-charge of the team continue to be with the company and work with zeal. Hence, organization commitment is a vital aspect for the success of any organization. There are three types of Organisational Commitment -**Affective commitment** which refers to employees' emotional attachment, identification with, and involvement in the organization. Employees with a strong affective commitment stay with the organization because they ***want to*****, Continuance commitment** which is employees' assessment of whether the costs of leaving the organization are greater than the costs of staying. Employees who perceive that the costs of leaving the organization are greater than the costs of staying remain because they ***need to*** and **normative commitment** which is employees' feelings of obligation to the organization. Employees with high levels of normative commitment stay with the organization because they feel they ***ought to*****.** Affective Commitment is the most desired organizational commitment. However, there is no tool to measure this before recruiting a potential employee. Precious resources are spent on employee before it can be ascertained if the employee is committed to organization in long run. This study aims to identify the linkage between Affective Organisational Commitment and Trait Emotional Intelligence of executives of Fast Moving Consumer Group (FMCG) companies in Chennai using Symbolic Regression and create an effective tool to measure Organizational commitment during the recruitment and promotion phase.

"A STUDY ON IMPACT OF GOODS AND SERVICES TAX (GST) IN INDIA"

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ABSTRACT

This paper is an analysis of impact of GST (Goods and Services Tax) on Indian Tax Scenario. GST is the only indirect tax that directly affects all sectors and sections of our economy. The goods and services tax (GST) is aimed at creating a single, unified market that will benefit both corporate and the economy. The changed indirect tax system GST-Goods and service tax is planned to be executed in India. France was the first country that introduced GST and several countries implemented this tax system. Goods and service tax is a new story of VAT which gives a widespread setoff for input tax credit and subsuming many indirect taxes from state and national level. India is a centralized democratic and therefore the GST will be implemented parallel by the central and state governments as CGST and SGST respectively. The objective will be to maintain a commonality between the basic structure and design of the CGST, SGST and IGST between states. In this paper discussed with the introduction, highlight the objectives, need for GST, features of GST, benefits of GST and impact of GST on various sectors.

Key Word: GST, CGST, SGST, IGST

INTRODUCTION

GST is one indirect tax for the whole nation, which will make India one unified common market.

GST is a single tax on the supply of goods and services, right from the manufacturer to the consumer. Credits of input taxes paid at each stage will be available in the subsequent stage of value addition, which makes GST essentially a tax only on value addition at each stage. The final consumer will thus bear only the GST charged by the last dealer in the supply chain, with setoff benefits at all the previous stages.

"Goods and Service Tax (GST) is a comprehensive tax levy on manufacture, sale and consumption of goods and service at a national level".

OBJECTIVES OF GST:

The following are the objectives of GST:

- Reduce distortion of prices due to tax policies
- Foster a common market across the country
- Distribute the burden of taxation equitably between manufacturing and services
- Lower the tax rate by broadening the tax base and reducing exemptions
- Reduce the burden on the taxpayer by eliminating cascading of taxes at multiple levels
- Simplify inter-state commerce

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Impact of Green Banking Initiatives on Banks' Profitability A Comparative Study of Public, Private and Foreign Banks

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Abstract

In the present scenario, banking industry is playing a vital role in the sustainable development of the world. In this respect, the RBI has introduced the new concept called "Green Banking". In India, most of the banks implement green banking in their operations. This paper investigates as to how green banking initiatives such as NEFT, RTGS, ECS, ATM, POS and Mobile banking impact the profitability of public sector banks, private sector banks and foreign banks. To achieve this objective, the hypotheses were framed and the study has found that among the three banking sectors, private sector banks deliver good performance in the form of adopting green banking initiatives such as RTGS, ECS, Mobile banking and NEFT transactions as compared to public sector and foreign banks.

Keywords: *Green Banking, Mobile Banking, Profitability, Private Sector Banks*

1. Introduction

Today, we are facing so many problems relating to the environment. The major problem is climate change. Climate change is occurring due to the effect of greenhouse gas; climate change creates global warming. To avoid such a problem now, most of the industries are taking some green initiatives such as the reduction of carbon footprint and energy consumption, investing in eco-friendly projects, etc. Particularly, banking industry plays an important role in promoting sustainable development of the world. In this respect, the concept of Green banking has emerged as an important subject and is recognized as a tool to address the issues confronting the sustainable development and to create awareness among the people on the environmental responsibility. According to RBI, "Green Banking has two dimensions. First, the way the banking business is being done i.e., paperless banking and the other dimension is green financing. Green Banking entails banks to encourage environment friendly investments and give lending priority to those industries which have already turned green or are trying to go green and thereby, help to restore the natural environment".

2. Green Banking/Paperless Banking – Products

The information related to various paperless banking products discussed below

2.(A). National Electronic Fund Transfer (NEFT)

According to RBI, NEFT is a nation-wide payment system that facilitates one-to-one funds transfer. Under this system, individuals, firms and corporates can electronically transfer funds from any bank

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IMPACT OF MERGERS AND ACQUISITION (M&A) : A STUDY ON PRE AND POST MERGER PERFORMANCE OF SELECTED BANKS IN INDIA

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P. S. Sridharan **

Abstract

The present study examines the impact of mergers and acquisitions (M&A) on the financial efficiency of the selected Banking Sector in India. Since 1999 the Indian Banking Scenario has witnessed a Phenomenal changes due to the globalization concept. To withstand the competitions from the MNC's in the global markets, many Indian companies have entered in to the M&A deals. The banking sector is considered as booming sector and the soundness of the banking system has been vital for the development of the country's economy. Hence an attempt is made in this study to analyze the impact of the pre and post Merger and Acquisition performances of select banks in India. The evaluation of performance were measured by using the ratio analysis. The M&A deals in banking companies that took place prior (Pre-merger) and after the deal (post-merger) ie., between 2004 – 2012 were taken for the study. The average performance of three years Pre- Merger and Post-Merger period were taken for the analysis. The main focus was based on the Overall Profitability parameters, Liquidity parameters, Solvency parameters. We found that there is no significant change in the Net profit margin of the Banking company, there is a significant change in liquidity position, and there is no significant change in the Long term Solvency position of these Banks. The results of the study indicate that M&A shows a significant improvement in the financial performance during the Post-Merger period of the Banking companies involved in M&A deal, and the acquiring firms were able to generate additional values in the post M&A periods.

Keywords: M &A, Profitability, Liquidity, Solvency Parameters, Paired T-test.

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IMPACT OF PUBLIC INVESTMENT ON AGRICULTURE SECTOR IN INDIA

K. Jothi Sivagnanam*, K. Murugan**

The public investment is important factors to promote agricultural sectors. Some of the reasons for slower growth in public investment in agriculture are diversion of resources from investments to current expenditure in the form of subsidies, large expenditure incurred on maintenance of existing projects, inordinate delays in completing the project on hand, relatively lower allocation for irrigation, rural infrastructure and research, lack of effective credit support and credit infrastructure in rural areas. There has been a secular decline in public investment till Tenth Five Year Plan period. In the Eleventh Five Year Plan period, there has been an increase in public investment significantly. However, this is not enough and the investment in agricultural research is still less than 1 percent of GDP.

Public investment in agriculture is crucial not only for the development of agriculture but also because of the economy's dependency on agriculture. Investment in irrigation structures for agriculture has social, ecological and environmental externalities that are largely positive. Agricultural investment has the potential to have significant effects on health, nutrition and poverty reduction. Unless there is massive step up in public expenditure on agriculture, investment would be extremely counterproductive. There may be increase in agricultural exports but would not be accompanied by increase in agricultural output. Consequently, inflation would increase sharply and there would be an adverse effect on non-agricultural output and employment. Hence, the overall impact of agricultural investment in its aggregate is at increasing welfare and development.

INTRODUCTION

Agriculture is one of the determining factors in the development of the human society. The share of agriculture is downward from 30 percent in 1990-91 to 13.9 percent in 2013-14. The public investment is important factors to promote these sectors in recent years. The public investment in agricultural sector has also promoted private investment by way of what is termed as the crowding in phenomenon. However, the rate of total investment in agriculture declined from 2.43 percent in 1979-80 to the low of 0.59 percent in 1994-95 and then recovered with a marginal increase to 1.28 percent in 2006-07 (Mani, Bhalachandran and Pandit, 2011). A clear shift in public policy away from public investment in general and particularly in agriculture is quite clear. Some of the reasons for slower growth in public investment in agriculture are diversion of resources from investments to current expenditure in the form of subsidies, large expenditure incurred on maintenance of existing projects, inordinate delays in completing the project on hand, relatively lower allocation for irrigation, rural infrastructure and research, lack of effective credit support and credit infrastructure in rural areas. The share of public investment in total investment declined from 50 percent in the early 1980s to 20 percent in 2000s. It may be noted that 90 percent of the private investment is made by farmers for on-farm production. The growth rates of investment showed that public sector investment showed a negative growth in the early 1980s and 1990s and a growth of 15 percent in 2000s. On the whole, the growth rate of public and private investment is the highest in the decade of 2000s (Dev, 2012). There has been a secular decline in public investment till Tenth Five Year Plan period. In the Eleventh Five

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Status of agricultural marketing reforms in Tamil Nadu.

Author(s) : Sivagnanam, K. J. (/cabdirect/search/?q=au%3a%22Sivagnanam%2c+K.+J.%22) ; Murugan, K. (/cabdirect/search/?q=au%3a%22Murugan%2c+K.%22)

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Journal article : Agricultural Situation in India (/cabdirect/search/?q=do%3a%22Agricultural+Situation+in+India%22) 2016 Vol.73 No.3 pp.29-34 ref.11

Abstract : In India, agricultural marketing has witnessed tremendous changes since the last six decades. It plays a crucial role not only in stimulating production and consumption, but also in accelerating the economic development. It assumes importance as the multiplier of agricultural development. The important thing to be noted here is that increasing demand for those goods whose prices are relatively high induces the farmer to cultivate crops where returns are higher. The modernization of agricultural market is essential for the development of the farmers and consumers in India as well as Tamil Nadu. There has been a need for intensive policy measures for the agricultural marketing in the recent days. The marketing policy for agriculture has considerably enhanced after the economic reforms in 1991. The objective of the reforms was to improve the agriculture marketing sector. A large quantity of the agricultural produce is not recognized by the domestic markets as well as world market; it is because of lower quality of the agricultural produce of the farmers in India. The agricultural produce of our country finds it rather difficult to compete in the international market due to globalization of the economic system. Therefore, there is need for the intervention of the government to solve this problem.

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A Tendency of Work Life Balance in Flexible Work Arrangement-Overview

D. Shoba and Dr.G. Suganthi

Abstract--- *Organizations are under constant pressure to produce goods and services, of the right quality and at the right price, as and when customers want them. To meet these demands sometimes new ways of working have to be found to make the best use of staff and resources. Flexible patterns of work can help to address these pressures by maximizing the available labour and improving customer service. The need for "qualified flexible work arrangement" is increasing, both in India and globally. However, there have been major researches in India on the family factors that influence the amount or type of flexibility needed to support families in different circumstances, or on the impacts that the use of flexible work arrangements can have on family life. This article is based on the new tendency and models related with flexible working models. The study also found that many people choose their work to fit around family responsibilities. This article provides a summary of the research, with a focus on the findings that relate to the impact of flexible work on family life.*

Keywords--- *Tendency, Flexible Work Arrangement*

I. Introduction

FLEXIBLE working describes any type of working arrangement that gives some degree of flexibility on how long, where and when employees work. While the statutory right to request flexible working may have helped make flexible working a familiar phrase within workplaces, flexible working arrangements has been an option in many employment sectors for a long time, helping employers meets the changing needs of their customers and their staff:

- Customers expect to have goods and services available outside of the traditional 9-5 working hours
- Employees want to achieve a better balance between work and home life
- Organizations want to meet their customers and employees needs in a way that enables them to be as productive as possible

As employers, organizations also have a 'duty of care' to protect their employees from risks to their health and safety. These risks might include stress caused by working long hours or struggling to balance work and home life. Flexible working can help to improve the health and well-being of employees and, by extension, reduce absenteeism, increase productivity, and enhance employee engagement and loyalty.

Flexible working arrangements are already used in many different employment sectors, such as:

- Part-time work, often used in hotels, restaurants, shops, warehouses etc
- Flextime, mostly used in office based environments for staff below managerial level in public and private sector service organizations
- Annualized hours, often used in manufacturing and agriculture where there can be big variations in demand throughout the year. With developments in technology, particularly in the availability of communication tools (such as fast home broadband and smart phones), more and more roles could be compatible with some forms of flexible working arrangement. While there is never a guarantee that flexible working arrangements will have a considerable positive impact, if proper consideration is given to what options may be suitable, benefits can include:
- A more efficient and productive organization
- A more motivated workforce
- Better retention of valuable employees
- A wider pool of applicants can be attracted for vacancies
- reduced levels of absence, sickness and stress
- Better customer service and increased customer loyalty
- Working hours that best suit the organization, its employees and its customers

II. Considering Flexible Working Practices

A. Potential barriers to establishing flexible working practices

With any prospective change to working practices there are issues that need to be considered before action is

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Examining the Relationship between Work Life Balance, Job Stress and Job Satisfaction Among School Teachers : A Case of School of Pondicherry

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KeyWords	Job Stress, Job Satisfaction , Work Life Balance, School of Pondicherry, Hafiz Hayat Campus				

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Abstract

The main purpose behind conducting the study is to investigate the relationship between work life balance, job stress and job satisfaction among School teaches. The study has been undertaken among teachers of School with reference to city of Pondicherry. A sample comprises of 171 teachers has been chosen from Govt School of Pondicherry. Random Sampling method has been used as sampling technique for the study. Questionnaire is the tool used for collecting data for the research. Data has been analyzed through Statistical Package for Social Sciences (SPSS). Descriptive Statistics, Correlation and Regression analysis has been applied to draw the results of the study. The findings of the study indicate that there is insignificant relationship between job stress and job satisfaction which prove H10 hypothesis whereas work life balance share a moderate positive relationship with job satisfaction which are in accordance to hypothesis H2A. Results of the study is helpful for educational institutions as well as teachers to get batter understating about relationship exist between job stress, work life balance and job satisfaction thus contributing toward their performance improvement.

GRT

A STUDY ON STRESS AMONG INSTITUTIONALIZED STREET CHILDREN

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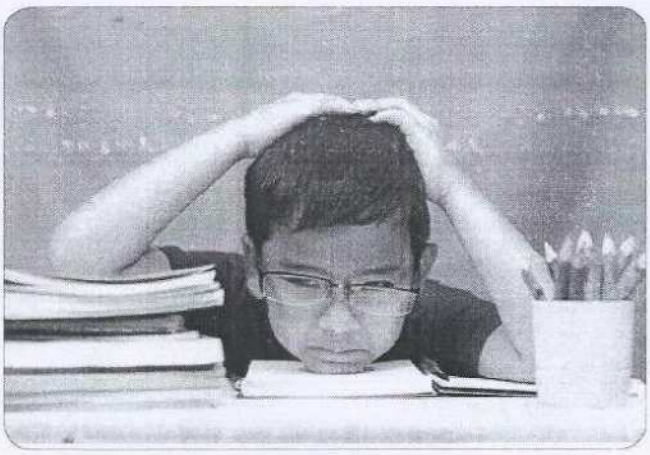
ABSTRACT:

The present study focuses on the impact of stress among institutionalised street children. The data was collected in one of the institutions for street children in Salem. Census method was adopted to select 47 children for the study. The tools used were a self prepared questionnaire to collect the socio-demographic details and a standardised Impact of Event Scale. The results reveal that the mean score for intrusive symptoms (intrusive thoughts, nightmares, intrusive feelings, and imagery) is 16.98, avoidance symptoms (numbing of responsiveness, avoidance of feelings, situations, ideas) is 13.96, and overall Impact event is 30.94 among the respondents. Majority of the respondents (74.5%) have a moderate level of impact. Psychosocial intervention will help children to overcome trauma.



Keywords: Street Children, Trauma, Intrusion, Avoidance, Abuse

INTRODUCTION :

Street children are those who spend most of their non sleeping hours in the street with or without family. Most of the street children are exposed to violence at home and in the street. They also experience physical and psychological harassment. All children are vulnerable, but compared to other children, street children are the most affected. They lack parental supervision, love, care, and protection UNICEF (1994) estimated that there were 11 million street children in India which is considered to be a conservative figure. The problems in the street may be multifaceted. The abuse at home, maltreatment, neglect due to family disharmony, and having alcoholic parents force children to run away from home and onto the streets where they are unaware of the presence bad elements of in society and suffer more abuse resulting in them developing high risk behaviour. Runaway/homeless youth often suffer from exposure to chronic family distress and confront numerous traumatic events in their lives (Williams et al., 2001). Street children are at higher risk as they are exposed to various exploitation at home and in society. The following case study helps in identifying their family background:

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Gandhian approach to rural development

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Abstract
The rural development means maximum production of Agriculture and allied activities in the rural areas, including development of rural industries and cottage industries. It gives more than employment opportunity in rural areas especially for the weaker section of the community so as to enable them to improve their socio – economic status. Gandhiji wanted to bring about rural reconstruction with scientific and spiritual values. He was successfully implemented 18 point programme. This article has discussed Gandhian perspective of 18 point constructive programme. This programme based on his experience and it was essential for rural development.

Keywords: Gandhian approach, rural development, economic status

Introduction
Mahatma Gandhi idea to develop the India society was based on his understanding of the society and hence, based on the village system. He further believed that India will have to live in villages, not in towns, in huts not in palaces. He was aware of the realities of the village life and knew the plight of half starved masses of India. His understanding of the plight of the people has been extremely well brought out in his writings, identifying his emphasis on removal of poverty over aesthetics. He wanted to bring about rural reconstruction with sound scientific and spiritual values. Through his 18-point Constructive Programme, Gandhiji successfully implemented his rural reconstruction activities in Sevagram Centre near Wardha in 1935.

Concept of Rural Reconstruction
His concept of rural reconstruction is a comprehensive one, emphasizing on the economic, political, social, educational, ecological and spiritual dimensions. The decentralized village economy should provide full employment to all on the basis of voluntary cooperation and work for achieving self-sufficiency in it is basic requirement of food, clothing and shelter. "My idea of Village Swaraj is that it is a complete republic, independent of its neighbours for its own vital wants and get inter-dependent for many others in which dependence is a necessity. Thus every village's first concern will be to grow its own food crop and cotton for its cloth. It could have a reserve for its cattle, recreation and playground for adults and children. Then if there is more land available, it will grow useful money crops, thus excluding Ganga, tobacco, opium and the like. The village will maintain a village theatre, school and public hall. It will have its own water works ensuring clean water supply"

Rural reconstruction
In 1935, Gandhiji's started his rural reconstruction activities Sevagram to implement his idea of Constructive Programme which Included Items such as the use of Khadi, promotion of Village Industries, Basic and Adult Education, Rural Sanitation, upliftment of the Backward Classes, the welfare of Women, Education in Health and Hygiene, Prohibition and propagation of the Mother tongue. He incorporated all these activities under his 18-point Constructive Programme and considers it as the truthful and non-violent way of winning 'pooma swaraj'. Constructive Programme is not a fragmented approach. It is an attempt to develop society at the grassroots level with the resources that are available locally.The 18-point Constructive Programmes included the following Items: l. Communal unity, 2. Removal of untouchability, 3. Prohibition, 4. Khadhi, 5. Other Village industries, 6. Village sanitation, 7. New or basic education, 8. Adult education, 9. Women, 10 Education in health and hygiene, 1 1 Provincial languages, 12 National language, 13 Economic equality, 14 Kisans, 15 Labour, 16 Adivasies, 17 Lepers, 18. Students. Let us discuss all these items one by one.

Communal Unity
Everybody is agreed about the significance of communal unity, which means an unbreakable heart unity. Thus it has a wider significance than political unity. For the attainment of communal unity, every social worker should aim at developing and encouraging the bond of love and regard among the Hindu, Muslim, Christian, Zoroastrian and Jew members and cultivate a unity based on such mutual love and regard. Gandhiji found that social stability of the country cannot be achieved without the social unity among different communities. The leaders of the communities have to play an important role in bringing about the harmony relationship between the communities. If they are united, the masses will naturally follow them. It is the duty of the leaders to refer the unresolved disputes to the Panchayat.

Removal of Untouchability
Untouchability is a social evil. According to Gandhiji, there should be perfect social equality among the people the society. No social superiority should be entertained by any individual or by a section of the society on the ground of birth or knowledge or religion or any other consideration. He has the

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Caste Discrimination on Dindigul Diocese – A Study

Mr. S. Yesu Suresh Raj[1]*

ABSTRACT

Dalits who converted to Christianity did not escape the caste system. The study analysed the present scenario of Dalit Christians in Dindigul Diocese. The main objective of the study is identifying the social – culture status of Dalit Christians in Dindigul diocese and to suggest a suitable action plan for their sustainable development. In the present study data have collected from both 'primary' as well as 'secondary' sources. The primary data were collected constituted of the respondent of all age groups and the interview method was used for data collection. The total sample consist of 20 respondents were selected by using simple random sampling technique. The researcher selected 20 villages in Dindigul Diocese. The collected data were analysed by using descriptive and simple percentage. Thus the study revealed that, to get a better understanding of the social and culture statues of Dalit Christain in Dindigul Diocese.

KEYWORDS: Dalits Christians, Discrimination, Social, Cultural and Diocese

INTRODUCTION

Dalits who converted to Christianity did not escape the caste system which has a strongly ingrained presence in Indian society that is not limited to Hindu religious ideals. The different branches of Christianity in India still engage in these societal practices with regards to the caste system, along with all its customs and norms. The Roman Catholic Church treated the caste system as part of the Indian social structure.

In the Catholic Church, the Dalits Christians form the majority, almost 70 percent: but it is the upper caste-people, only 30 percent of church population, who control the Church by pre-emptying the key position. The majority of the catholic bishops and clergy, the religious and lay leaders, come from the higher caste. One can say that this 30 percent, the upper caste, occupy the 90 percent of the administration and leadership of the church. The untouchability is practicing among Christians within the Church, cemetery, festivals, and marriage alliances, etc. The caste

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Studies on Psyllidgall of two selected plants

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Abstract

Objectives: The mechanism underlying the morphological and structural specificity of galls attributable to particular insect species is very little understood. The present study is a fragment of the galls found in the Nilgris and Courtallum Hills in India and the study has offered some interesting results and conclusions.
Methods / Statistical Analysis: A comprehensive study on two leaf galls exhibiting evidently different ontogenetic sequences is attempted in the present investigation.
Findings: We studied histology of maturefoliar galls on two host plants caused by different insect species. The pit-gall on *Mallotusphilippensis* is simple in structure with homogeneous parenchymatous tissue. The galls on *Alstoniascholaris* and *Magniferaindica* are more complex in structure.
Application / Improvements: Cecidological studies gain popularity nowadays as they form the most conspicuous elements of the terrestrial ecosystem. The role of the insect behavior is considered as the major factor in determining the form and structure of the gall that an insect incites.

***Keywords*:** Plant gall, Leaf gall, Psyllid, *Alstoniascholaris*, *Mallotusphilippensis*.

1. Introduction

The galls are externally visible expressions resulting from a series of biochemical and biophysical reactions occurring in plant tissues due to infection of parasitic organisms [1, 2].Galls occur on all parts of the plants. Among the aerial organs, leaves dominate over other organs in number, structural complexity and morphological diversity of galls as well as the association of so many diverse groups of gall organisms. On the basis of the morphological and anatomical features, the galls may be grouped into different types [3]. The distribution of galls in India presents some interesting features [4]. There are certain galls, which are countrywide in distribution, while others are restricted in their occurrence. The Western and Eastern Ghats, the vindhya and satpura regions, the chota-Nagpur plateau, Assam and the wooded slopes of the Himalayas represent the places of richest gall development [3]. The developments of the gall were described by [5]. The homoptera order includes many important gall insects which belong to the families *Chermidae (Psyllidae), Aphididae, Phylloxeridae, aleurodidae*and *Coccoidae.* Of all these groups, the psyllids constitute major group of insects responsible for the scrub forest galls. They induce galls on the leaves and the galls are mostly **pouch** type or **Pouch-cum-covering-growth** type. The Psyllids are major groups of cecidozoa and more than 350 psyllids have been reported to be cecidogeneous in the world [4]. A total of 41 gall-forming species belonging to various subfamilies of pshyllidae have so far been recorded from India [6]. They induce galls, mostly on leaves of different plants.

2. Materials and methods

The galls for the present study were collected from Courtrallam deciduous forest of Tamil Nadu. The plants were identified with the help of Flora of Madras Presidency [7]; Flora of Madras City and its neighborhood [8, 9]; Flora of Tamil Nadu [10, 11]. Latest nomenclature of the plants was followed as per "The Plant Book by [12]**".**Collections were made by visiting the above place during the following periods, June, August, September 2013 and June, July, August 2014.Both normal and affected plant parts were collected in the field. Herbaria of these plants were also prepared and used for further identification or reference. The leaves with mature galls and also those of normal ones were separately fixed in FAA (Formalin Acetic Acid-Alcohol). Fresh materials were used for morphological study and photography. The requisite materials were passed through the tertiary butyl alcohol series [13]-[16] for dehydration and embedded in paraffin wax. Serial sections were cut with the help of a rotary microtome, at 10-15 mm thickness.

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Studies on vein gall of two selected plants in Courtallum hills

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Abstract

Objectives: Analysis of Plant Galls at their cellular level is one of the technique, which helps a researcher who intends to study the mechanism underlying the growth and development of the plant either *in vivo* or *in vitro*.
Methods / Statistical Analysis: The present study on the foliar galls deals with the histology of mature galls on two host plants caused by unknown Diptera insect species.
Findings: Researchers value galls for their intrinsic biological interest, their use as model systems for physiological and other studies and their potential applications in disciplines such as biological control and plant breeding.
Application / Improvements: Inaccessibility of sophisticated instruments and techniques for the in-depth study are regrettable limitations for our investigation. However, it did not detract the efficacy of the studies, because some of the customary instruments and the techniques, if employed with some precision, prove to be sufficiently satisfactory, especially for the studies of fundamental nature as the present one.

***Key Words*:** Plant gall, Vein gall, *Capparisdiversifolia*, *Ficusmollis*, Diptera.

1. Introduction

The galls are visible expressions resulting from a series of biochemical and biophysical reactions occurring in plant tissues due to infection of parasitic organisms. Highly specific morphogenetic stimuli are elaborated by these parasites, especially the animal parasites, which are capable of initiating, stimulating and directing most precisely the development and differentiation of plant cells. During the development of galls there may be greater or lesser degree of departure free the general morphogenetic restraint of the organ of the plant involved in galling. Depending upon the quantum of deviation from the normal ontogenetic processes, the gall may be simple or complex in their architectural pattern. Galls are formed on all groups of plants, ranging from cryptogamic flora to the Angiosperms. Any organ of a plant is susceptible for gall development, the laminar part of the leaves seems to be more favourable organ for gall development than any other organ of the plant. The plant galls are caused by various agents in nature, which may be physical, chemical agents, Genetic constitution, bacteria, virus, fungi and insects. On the basis of the morphological and anatomical features, the galls may be grouped into different types [1]. In the extreme Southwest corner of Western Ghats, many galls show pronounced affinities with those known from Assam, Burma, Indo China and Malaya. The scope of the study, as the present one, needs to be enlightened. The study is basically of fundamental importance, because it provides the basic information on several elusive phenomena such as totipotency, morphogenesis under natural as compared with altered situation, factors controlling differentiation or redifferentiation and effects of stress of one organism on the other leading to change in the metabolism, growth and development of the affected organism.

2. Materials and Methods

The materials for the present investigation were collected from various places of Courtallam hills, Tirunelvelli district, Tamil Nadu, India. Collections were made by visiting the above places during the following periods from August 2015 to August 2016. The two selected leaf vein galls of *Capparisdiversifolia* and *Ficusmollis* infected by unknown Diptera insects were chosen for the present investigation. Both normal [2] [3] [4] and affected plant parts were collected in the field. Host plants were identified with the help of different floras [5] [6] [7]. The Plant galls of India [8] was referred to identify the galls and their incitants, which were already reported and to ascertain the unrecorded ones. The leaves with mature galls and also those of normal ones were separately fixed in FAA (Formalin

A STUDY ON EMPLOYEE REWARDING & SOCIAL SECURITY PRACTICES OF LEATHER INDUSTRIES IN CHENNAI

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ABSTRACT

Every organization uses a variety of resources to generate revenue for a business. Amongst all resources required for an organization Human Resource is the most important resource. To retain efficient and experienced workforce is very crucial in overall performance of an organization. Rewarding and social security are most important aspect for the employee in the industry especially for Leather industries.The leather industry is an employment intensive sector. This research study is conducted to know what the organizations are contributing towards their employees, society, environment, etc. The aim of this research paper is to analyses the rewarding and social security practices of selected leather units.

Key words: Employee, Rewarding, Social Security, human resources.

INTRODUCTION

Resource means, a source, which can be used when needed. Every product or services can be producedwith the help of human mind, effort and man hours (working hours). Human being is the fundamental resource for making or constructing anything.

The organizations are trying their level best to treat human capital through HR practices. Employee rewarding and social security are essential as well as important aspect for the employees in an organization..

Rewarding means an employee receives in exchange for their contribution to the organization. That keeps an employee motivated as well as also gives better performance in the work and in social security that gives security to the employee's life and their family also.So an organization can achieve the goal by giving rewarding and social security benefits to the employees to make their performance better in the work

OVERVIEW OF INDIAN LEATHER INDUSTRY

The Leather Industry holds a prominent place in the Indian economy. It has the strengths of skilled manpower, innovative technology and the dedicated support of the allied industries. It is providing job to about 2.5 million people, mostly from the weaker sections of the society. Women employment is predominant in leather products sector with about 30% share.

CREATING BETTER WORK ENVIRONMENT- A STUDY ON THE EMPLOYEES' PERSPECTIVE IN FOOD – RETAIL STORES IN CHENNAI

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ABSTRACT

The work environment is one of the most important factors which influence the satisfaction & motivation level of employees. It can implicate the social relation at workplace and also maintain the relationship between colleagues, supervisors and the organization. Effective results and productivity for any organization depends on the level of satisfaction of employees. A satisfied, happy and hardworking employee is the biggest asset of any organization.This research paper is an attempt to study the relationship between the work environment and its effect on job satisfaction of employees, working in leading food retail stores in Chennai.

Food – retailing is an important element of business in Indian market with its significant contribution to the economy. The Indian food retail sector is dominated by unorganized sector with 90% share; however the organized sector is steadily increasing with the entry and operations of departmental stores, hyper markets, supermarkets and specialty stores. The present retail organizations which are performing organized retailing are facing huge challenges in procuring and retaining and maintaining qualitative human resources.Hence, an attempt was made to analyze the working conditionsof employees in 4 selected food retail storesunder organized retailing in Chennai, namely Reliance fresh, More, Nilgiris and Heritage fresh and its effect on job satisfaction of employees.

INTRODUCTION

The term work environment describes the surrounding conditions in which an employee operates. A work environment is made up of a range of factors, including physical, psychological and social factors that have an effect on the employees' welfare.Employee satisfaction is the degree to which employees feel personally fulfilled and content in their job roles.Knowing how to use a positive work environment to increase employee satisfaction and reduce turnover is the key for the growth of any organization. The present study identifies three main factors of work environment that affects the satisfaction level of employees: **Training, supervisor's support** and **physical workplace facilities**.

ORGANIZED RETAIL SECTOR

Retailing is a distribution channel function, where the retailing organization will buy products fromcertain manufacturers and then sell it directly to consumers.The Indian retail industry is divided into organized andunorganized sectors.

- ***Organized retail*** - Organized traders/retailers are those who are licensed for trading activities and registered to pay taxes to the government.

.EMOTIONAL INTELLIGENCE FOR EFFICACIOUS SUCCESS TODAY

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ABSTRACT

Human life is under going constant change right from its evolution. With the development of Science and Technology the generation today is spending most of their prime time with electronic devices. This technology has drifted away from their relationships. Social media is playing a major role in this. Emotional Intelligence has to be improved to live a successful life. Emotional Intelligence is needed to enhance one's living, to empathise, and manage interpersonal relationships. Students today must learn the inter and intra personal skills, learn to face difficult situations and improve tolerance. In today's scenario, how one portrays himself is more important than being a subject expertise. This paper will analyse the different criteria's of Emotional Intelligence as to how a person can upgrade himself with Emotional Intelligence and how soft skills plays a major role in embracing success.

INTRODUCTION

Career with a Charismatic Character

Emotional Intelligence is the ability to know your emotions and others emotions and use them to foster your success in inter and intra-relationships. Knowing one's Emotional Intelligence and using it to enhance one's life in a positive way is the need of the hour. Emotional Intelligence increases the balance of managing emotions and supports the stability of a person in controlling his behaviour. It helps to give their best to resolve conflict quickly and to solve their inner conflicts efficiently. Emotional Intelligence enables a person to empathise others, which is the necessary attitude that need to be developed among this tech-gen people.

"Try not to become a man of success but rather to become a man of Value, Success will follow you".

-Albert Einstein.

People today are living in a cyber world, where the day begins and ends with technology. The TECH-GEN is so much engrossed in the life driven by Science and Technology, the youth of today fail to imbibe the human values in their life. Though at one facet the growth based on Science, Technology and Economy is welcomed, there has been a drastic deterioration in Emotional Intelligence.

Emotional Intelligence in today's youth

Lets make a comparative study with the life style of the present generation with the generation two decades ago. People lived in joint family system in those days which taught them interpersonal and intra-personal relationships. Emotional Intelligence was high as they weren't controlled by the Science and Technology. On the other hand, people live in nuclear family and they are scattered to various parts of the world for their career development. Education too has opened more avenues to venture and equip themselves.

IMPACT OF TECHNOLOGY DEVELOPMENT ON THE PERFORMANCE OF COLLEGE TEACHERS-AN EMPIRICAL STUDY WITH REFERENCE TO ARTS AND SCIENCE COLLEGES IN CHENNAI

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ABSTRACT

"We need technology in every class room and in every student and teacher's hand, because it is the pen and paper of our time, and it is the lens through which we experience much of our world."

- David warlick

Today technology is all pervasive and it influences all domains of our daily life. The developments in information and communication technology have changed the way educational services are offered. Technology enables to take education and learning go far beyond the confines of institutionalized instructions, structured study programmes and teacher-centered teaching learning process. ICT (Information and Communications Technology) helps take learning beyond schools and universities. Today digital literacy overcomes constraints of age, income and class. The Government of India Plans to connect institutions of higher education and research and provide broadband connectivity at all levels of education and administration. The teacher must use the ICT enabled technologies for the teaching-learning process-especially, giving lectures through power-point presentations. The teachers must effectively utilize the open source materials which are available in plenty. They are urged to effectively utilize the social media like Face book, Twitter, You Tube etc., for the student – centric teaching – learning process. The UGC, AICTE, NCTE, etc., are all expediting higher education on e-Technologies through MOUS with Intel and other e-learning platform providers. There is a wide scope for transformation of Higher education through technology from traditional learning to e-learning. Let the today's teachers try to adopt these in their teaching-learning process and make the higher education system vibrant.

This paper attempts to know the impact of technology development on the performance of college teachers working in Arts and Science Colleges in Chennai

Key words: ICT enabledTechnology,. Performance of teachers.

INTRODUCTION

In the present education Scenario, the conditions for teaching in higher education are being increasingly influenced by the use of technology and digital tools for pedagogical purpose. Technology can be effectively used in the professional practice of teachers. In this age of digitization, being able to effectively apply technology should be high on the list of what teachers at all levels of our education should know and be able to do in any instructional transaction. There is substantial evidence that if used appropriately for specific purposes in specific contexts, technology can be an effective tool in supporting teaching and learning. The technological developments place new challenges and demands

OLD AGE HOMES - AIM AT THE SOVEREINTY IN THE LIVING STATE OF ELDERLY

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ABSTRACT

The family welfare assumes the foremost priority to address the social issues task of modernstate is to preserve the sovereignty – elderly differ with diversified issues as they are heterogeneous by nature, social system shuns to explore venue to the elderely care otherwise sunset years most uncompromising , significance of living arrangement in old age explicates the physical well being of the aged in the family. This paper aims at the regime of fadeing traditional family system, the source of care and the social help and services, in the sun set years, different kinds of homes in and around Chennai city and the variety of services in the sun set years-institutuonal care – a need for the hour. Nature of old age homes in Tamil Nadu- different kinds of homes in and around Chennai city and the variety of services with familial environment- old age care is no more problem in the elite society- a battle field among the middle class elderly – a state of abundance of lower income elderly. The gamut of issues related to the life of elderly – not only the family is accountable- the social and cultural impact of the contemporary society.

Key Words: Issue of elderly care- New mode of ageing- A Surge of OAH across the City - Lending New Life

INTRODUCTION

The state of doing well especially in respect of good fortune, happiness, well being or prosperity of the people is a primary factor of social infrastructure for the progress of the entire economy of the country. The family welfare presently assumes the foremost priority in the underlying ideological plan of all developmental program of modern state to address the social issues. One of the multifarious tasks before the modern state is to preserve the sovereignty of the senior citizens. A nation cannot triumph in designing to assist growth or bringing about improvement unless it annexes importance to the viable alternatives with the solution to the problems of its senior citizens to drive its growth story.

A quality is the essential character of human life, which forms the valid goal of one's life. A grade or a degree of excellence in life refers to the overall sense of state of being happy, healthy and prosperous. A distinguishing attribute in life is decided by multifarious determinants. One among them is the sterling living status and essential care in the final stage of life. Every phase of life abounds in varied disorderly phenomena but the challenges encountered by the elderly citizens are very nerve racking. A task that the state is expected to do for its senior population is accomplished through the program and distribution, but social care of the elderly is still an un tackled subject. The survey made on the subject of this crucial issue, the social rigidity is much evident that in sunset years, social system needs to harbor safety but fails to scrutinize intensely the reality of the living condition of elderly. The social system shuns to explore the venue to the elderly care which otherwise crumbles making the sunset years the most uncompromising.

KNOWLEDGE MANAGEMENT THROUGH MOBILE AD HOC NETWORKS IN EMERGENCY SITUATIONS

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ABSTRACT

This article describes knowledge management in the mobile ad hocimplications of mobile ad hoc networks using wireless technology designed for emergency situations. Data is the lowest level of information and information is transformed data presented in a meaningful way for the user. Knowledge can be defined as the capability that creates action form information. Mobile ad hoc network is comprised of mobile host that can communicate with each other using wireless links. Mobile ad hocnetworks are most flexible computer networks that currently exist. They can be built anytime anywhere using any wireless enabled devices and provides end to end connectivity. It deals with discussing the features, benefits, challenges and characteristics of knowledge management tool in mobile ad hoc networks. This follows the path of a research project in concerning the need to integrate technologies, logistical and organisational knowledge management issues within and between organizations with regard to their response to emergency situationnetworks domain. It reports on an analysis of the knowledge management.

INTRODUCTION

Nowaday's security and safety issues are of important and relevant for every individual and organizations. This article addresses the direct preparation for andresponse to public emergency situations. This paper results from an analysis of the knowledge management (KM) implications of wireless ad hoc technology being designed for critical public safety situations. It allows the path of a research project into the need to consider and integrate technological, logistical, and organisational knowledge Management issues with and between organizations with regard to their response to emergency situations, Knowledge Management is important for the deliberate activities of planning and preparing for such unwanted eventualities as well as reviews that occur afterwards to determine the lesson learnt.

Objectives

To improve better understanding of knowledge Management with wireless technologies which are being taken by organisations? This study aims to add to the understanding of the technologies, human issues and sociotechnical systems formed in emergency situations.

JOB SATISFACTION AND MOTIVATION OF PERSONNEL THROUGH PERFORMANCE APPRAISAL SYSTEM

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ABSTRACT

Assessment of employees' performance is one of the most familiar practices in almost every organization, an essential fact for the better performance of employees and the organizations. Human resource is very important for any organization. If employees of any organization are happy, they will do their best for the organization and vice versa. So it is vital to manage the human resource. Organization tries to satisfy and motivate employee to do their best by different means and the Performance Appraisal is one of those.Performance appraisal systems are used in many organizations to recognize the better performing employees who must get the majority of available merit such as, bonuses,pay increases, and promotions. Performance appraisal system is necessary to any organization as it determines the organization's achievement or failure.Different organisations use different techniques to assess the performance of the employees. If no appraisals is given to the employees on their good performance then they will not perform well again. Performance appraisal satisfaction has astraight relation to the job performance. In the relationship of performance appraisal and job performance, there can be a mediator called motivation. Motivation can increase the relationship and positive work performance. This paper gives an insight about the reviews of past research article on job satisfaction of employee on Performance appraisal system and from the reviews it was identified that there exist a relationship between Performance

Key words : Appraisal and Job Satisfaction, Motivation, and Promotions.

PERFORMANCE APPRAISAL

The practiceofperformanceappraisalhelpstheemployeeand the management to know the level of employee'sperformance compared to the standard/predetermined level. Performance Appraisal is essential to know theemployee'sperformancethroughHRD.

PerformanceAppraisalisthepracticewhichisusedtoanalyzethe employees work performance i.e., thestrengthsand weakness, so that it may help the organization toprovide appropriate training to them and thus helps in developing theorganization's performance.

Purpose of Performance Appraisal

- Providing opinion to employees about theirpermance
- Determining who getspromoted
- Facilitating layoff or downsizingdecisions
- Encouraging performanceimprovement
- Encouraging superior performance

ISSUES AND CHALLENGES OF GENDER INEQUALITY IN INDIAN BUSINESS ENVIRONMENT

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ABSRACT

Gender equality is a fundamental human right and a necessary foundation for a peaceful, prosperous and sustainable world. Yet despite progress, women and girls around the world do not fully experience equal rights and their potential as economic, social and sustainable development change-agents remains untapped. Studies identified that women are under-represented in power and decision-making roles in the top management. Moreover, the major sections of women are receiving unequal pay for equal work and they continue to be targets of physical and sexual abuse. Additionally, women-owned enterprises are economically disadvantaged and lack equal opportunity to compete for business opportunities. Women also face legal and other barriers that affect their opportunities at work and as entrepreneurs. According to the World Bank-Enterprise Surveys, India is lacking behind in per cent of firms with a woman as the principal owner. It is to be noted that 10.7 per cent of the women are possessing the ownership and India is placed 132nd among the 139 countries. Moreover the same survey signifies that the Firms with females as top managers in India is occupying 98th position among 138 countries. Taking this data into consideration, the present study will analyze the factors which are a barrier for the women's representation in the Indian Business.

Key Words : Women, Inequality, barriers, factors, Indian Business

INTRODUCTION:

Gender equality is a fundamental human right and a necessary foundation for a peaceful, prosperous and sustainable world. Yet despite progress, women and girls around the world do not fully experience equal rights and their potential as economic, social and sustainable development change-agents remains untouched. Studies identified that women are under-represented in power and decision-making roles in the top management. Moreover, the major sections of the women are receiving unequal pay for equal work and they continue to be targets of physical and sexual abuse. Additionally, women-owned enterprises are economically disadvantaged and lack equal opportunity to compete for business opportunities. Women also face legal and other barriers that affect their opportunities at work and as entrepreneurs.

According to the World Bank-Enterprise Surveys, India is lagging behind in per cent of firms with a woman as the principal owner. It is to be noted that 10.7 per cent of the women possess the ownership and India is placed 132nd among the 139 countries. Moreover the same survey signifies that the Firms with females as top managers in India is occupying 98th position among 138 countries with a percentage of 8.9.

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A REVIEW ON HUMAN DEVELOPMENT INDEX

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ABSTRACT

This paper provides a review related to Human Development Index (HDI) as discussed by economists. In economics, the concept 'development' refers largely to 'growth in income'. Economic development in terms of income growth is a *necessary* condition for improving the human welfare but it is *not* a sufficient condition. Hence, there is a need for *quality of life*, which can be achieved through improved knowledge and improvements in health outcomes at the individual level. Improvement in individual levels will enhance welfare at social level. Several economists have made different comparative studies on HDI of less developed and developing countries. They found out that it is very difficult to compare developed and less developed countries, with the help of literacy and health indicators of HDI. They offered a new quantitative vision of the human development as a valuable tool for governments and companies in determining their activities and operations, by providing the quality labour force with quality education and standard health. Moreover, obtaining data on such indicators may be most effective contribution of the HDI rather than finding new ways of expressing existing indicators.

Introduction

Development has many other dimensions, than income. One cannot talk about development only in terms of socio-economic improvements. It is related to awakening and well-being of an individual, and its goal is to create harmony between the individual, the family and the community. Development must include moral, cultural, social, spiritual, economic and political dimensions. This is called, 'wholesome development'. Wholesome development is the unfolding of freedom, joy, health and ease, apart from income (Esterlin, 2000).

Amartya Sen and Mahbub-Ul Haq have developed the concept of 'Human Development and it was popularised by the United Nations Development Programme (UNDP). Human development is a development of the people, development for the people, and development by the people. Development of the people involves building human capabilities through the development of human resources. Development for the people implies that the benefits of growth must be translated into the lives of people and development by the people emphasised that people must be able to participate actively in influencing the processes that shape their lives.

According to UNDP, human development is a process of enlarging or widening people's choices and building human capabilities. There are two methods available to construct HDI. In the first method to construct HDI the following formula is being used.

HDI = 1/3 (Health Index + Education Index + Income or decent standard of living Index).

Health Index = Actual Life Expectancy at Birth-Minimum Life Expectancy at Birth / Maximum Life Expectancy at Birth-Minimum Life Expectancy at Birth.

Education Index = 2/3 (Adult Literacy Index) + 1/3 (Gross Enrolment Ratio Index)

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THE DIMENSIONS OF GRATITUDE

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Abstract

The Heroes of the Indian EPICS are glorified for their service to humanity and gratefulness. Karna is the embodiment of the gratitude. They are our role models and a part of moral educations. Now a day's gratitude is valued as a positive human attitude and is inculcated in the moral lessons and human value education. Therefore, there is a need for study of different dimensions of gratitude such various helpers in times of stress/trouble in life and gratitude level of them, helping purposes and gratitude level to the helpers in the organizations and also expression mode of gratitude. Expression gratitude helps both benefactors and beneficiaries to feel good and more to timely helpful to others.

Keywords: Gratitude, Gratefulness, Factor names and dimensions of Gratitude

INTRODUCTION:

"It is not joy that makes us grateful. It is gratitude that makes us joyful"

The gratitude defies has conceptualized as emotion, attitude, moral virtue, habit, personality, trait, and a coping response. The gratitude is derived from Latin root "Gratia", which means grace, graciousness and gratefulness. The Latin root "Gratia" means "have to do with kindness, generousness, gifts, and the beauty of giving and receiving, or getting something for nothing". Gratitude, thankfulness, gratefulness, or appreciation is a feeling or attitude one who recognize a benefit that he received or will receive. We express gratitude through the word "Thank you, a praise or appreciation" It expresses emotional attitude and makes a personal bondage between the beneficiaries and benefactors. The express of gratefulness or gratitude has historically been focused in several religions.

RELIGIOUS APPROACH TOWARDS GRATITUDE:

The relationship between spirituality and gratitude is not interdependent on each other but many studies have found that spirituality is more capable of enhancing a person's ability to be grateful. Those who are regularly attending the religious activities are having more gratitude in his life. The gratitude is viewed as prized human propensity in the Christian, Buddhist, Muslim, Jewish and Hindus.

GRATITUDE IN INDIAN EPICS: Being Grateful has been glorified in the Indian EPICS as the moral virtue to be emulated by everyone as depicted in the Relationships between Heroes.

KARNA TO DURYODHANA:

When the people of Hastinapur blindly followed the caste system, it was the Duryodhan who broke all the caste system and gave the son of the charioteer a status as a king by his talent and knowledge deserved. He neither considered his background unlike his teacher Kripacharya who denied

PERSPECTIVE AND PROGRESS OF FDI IN INDIA

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ABSTRACT

Apart from being a critical driver of economic growth, foreign direct investment (FDI) is a major source of non-debt financial resource for the economic development of India. Foreign companies invest in India to take advantage of relatively lower wages, special investment privileges such as tax exemptions, etc. For a country where foreign investments are being made, it also means achieving technical know-how and generating employment.The Indian government's favorable policy regime and robust business environment have ensured that foreign capital keeps flowing into the country. The government has taken many initiatives in recent years such as relaxing FDI norms across sectors such as defense, PSU oil refineries, telecom, power exchanges, and stock exchanges, among others.

FDI IN RECENT YEARS

According to Department of Industrial Policy and Promotion (DIPP), the total FDI investments India received in FY 2015-16 (April 2015-March 2016) was US$ 40 billion, indicating that government's effort to improve ease of doing business and relaxation in FDI norms is yielding results.Data for FY 2015-16 indicates that the services sector attracted the highest FDI equity inflow of US$ 6.9 billion, followed by the computer hardware and software sector (US$ 5.9 billion). Most recently, the total FDI equity inflows for the month of March 2016 touched US$ 2.47 billion as compared to US$ 2.12 billion in the same period last year.During FY 2015-16, India received the maximum FDI equity inflows from Singapore at US$ 13.69 billion, followed by Mauritius (US$ 8.35 billion), USA (US$ 4.19 billion), Netherlands (US$ 2.64 billion) and Japan (US$ 2.61 billion). Healthy inflow of foreign investments into the country helped India's balance of payments (BoP) situation and stabilised the value of rupee.

FDI in India witnessed an increase of 29 per cent and reached US$ 40 billion during April 2015-March, 2016 as compared to US$ 30.93 billion in the same period last year.According to the data released by Grant Thornton India, the total merger and acquisitions (M&A) and private equity (PE) deals in the month of April 2016 were valued at US$ 5.5 billion (100 deals), which is 2.2 times higher as compared to April 2015.India has also overtaken China as world's top foreign direct investment (FDI) destination with US$ 63 billion of FDI announced in 2015 including high-value project announcements across the coal, oil and natural gas, and renewable energy sectors.

GOVERNMENT INITIATIVES FOR FDI

Budget 2016-17 has proposed several reforms in FDI Policy in areas of insurance and pensions, asset reconstruction companies and stock exchanges, such as easier governing and fund raising norms, clarification of tax related matters and higher FDI limits.

A PEEP INTO INVESTMENT PLANS OF MUTUAL FUND INVESTORS IN CHENNAI

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ABSTRACT

Mutual funds play an important role in the financial market. Mutual Fund is an investment method that pools together funds from investors to invest in stocks, bonds or other securities. Investors get the benefit of higher rate of return from their investment accordingly with certain risks involved. This paper analyzes the demographic profile with regard to age, gender, educational qualification, occupation and monthly income of mutual fund investors and also aims to identify the most sought after investment option chosen by them. Factors influencing the investors' preference towards mutual funds investment, source of information creating awareness among investors are understood by framing a questionnaire and collecting the opinion of mutual fund investors.Mutual fund sector and industry preferred by investors is studied. The present scenario of mutual fund investment is studied with reference to Chennai.

Key Words: Mutual Fund, Investment, Investors.

INTRODCUTION

In India, Mutual Fund concept took roots only in sixties, after a century old history elsewhere in the world. It was introduced in India by Unit Trust of India (UTI) in1960s.Mutual funds are pooled investment vehicles actively managed either by professional fund managers or passively tracked by an index or industry. The funds are generally well diversified to offset potential losses. Mutual funds present an option for investors who lack the time or knowledge to make traditional and complex investment decisions.

A mutual fund is set up in the form of a trust that has a Sponsor, Trustees, Asset Management Company (AMC).Mutual funds in India are regulated and monitored by the Securities and Exchange Board of India (SEBI), which endeavors to protect the interests of investors. All funds are registered with SEBI and complete transparency is enforced. The Association of Mutual Funds in India (AMFI) is dedicated to developing the Indian Mutual Fund Industry on professional, healthy and ethical lines and to enhance and maintain standards in all areas with a view to protecting and promoting the interests of mutual funds and their unit holders.

ONLINE MARKETING – A CONCEPTUAL STUDY

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ABSTRACT

Online marketing refers to a set of powerful tools and methodologies used for promoting products and services through Internet. In the past few years, Internet and E-commerce business activities have become one of the fastest growing technologies that playing a significant role in the every life of human being.The main view of this paper is to explore E- marketing, the advantages and disadvantages of E-marketing and it explores the opportunities of E-marketing in India. This review states that Online marketing System provides greater reach to customers. In addition to know various strengths of Online marketing system such as quality customer service, greater reach, time saving customer loyalty, easy access to information, 24 hours access, reduce paper work, no need to carry cash and easy for online applications.

INTRODUCTION

Marketing is the tool that a business attracts, keeps and sells to customers. In order to be effective in marketing, it must be focused toward the business, its demographic customer base, its competitors and market creations. The best tool to determine a business' marketing needs is to go through a checklist of the most general ways to market to customers, and then find them off according to what is required in the current marketing plan. It is major to note that there are no global marketing strategies; every business will have a various techniques to advertise to their customers.The fact, that 'marketing' has undergone substantial changes over the recent years, and the key role in this transformation has been played by internet. Internet "refers to the physical network that links computers across the globe. It consists of the infrastructure of network servers and wide area communication links between them that are used to hold and transport the vast amount of information on the internet".

E-Marketing or electronic marketing refers to the application of marketing principles and techniques via electronic media and more specifically the Internet. The terms E-Marketing, Internet marketing and online marketing, are frequently interchanged, and can often be considered synonymous. E- Marketing is a mixture of all the activities of advertising, promotion publicity deciding the look and feel of the product, how it will be sold and sent to the customer etc (P.T.Joseph 2008).E-Marketing is the process of marketing a brand using the Internet.

Online marketing as the process of building and maintaining customer relationships through *online activities to facilitate the exchange of ideas, products and services that satisfy the goals of both* parties. Online advertising, also called online marketing or Internet advertising is a form of marketing and advertising which uses the Internet to deliver promotional marketing messages to consumers. "Applying Digital technologies which form online channels (Web, e-mail, databases, plus mobile/wireless & digital TV) to contribute to marketing activities aimed at achieving profitable

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RESEARCH ARTICLE

MEASURING THE EFFECTIVENESS OF THE RESOURCES AND SERVICES IN DISTRICT CENTRAL LIBRARIES IN TAMIL NADU – A STUDY

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Abstract

The basic objective of this research paper is to measure the effectiveness of Resources available and Services offered by District Central Libraries (DCL) in Tamil Nadu, also to find out the purpose of library visit and information needs of the DCL users and their opinion about DCL Library Staff. A Survey method was conducted through structured questionnaire and analyzed in depth by applying statistical techniques, the study reveals that initiatives has to be taken by the DCLs authorities to improve services as well the library resources too and the library staff showcase their knowledge and skill by way of serve more professional way.

Keywords : *District Central Libraries (DCL), Resources and Services, Library Staff.*

Introduction

Definition

IFLA/ UNESCO Manifesto 1994[1] "The services of public library are provided on the basis of equality of access, regardless of age, race, sex, religion, nationality, language or social status. In other words, it is open to the entire society".

Dr. S. R. Ranganathan[2] defines "Public library as a library owned and maintained by the public of its area for the socialization of its books and kindred materials for free service to the people of the area."

Objectives Of The Study

1. To identify the purpose of DCL visit and information needs of the users in Tamil Nadu;
2. To find out the opinion about the resources and services offered by DCL in Tamil Nadu; and
3. Bring out the users point of view about the staffs work in DCL.

Scope of the Study

There were previous studies in this area but the geographical coverage is less but this study covered all 32 DCLs in Tamil Nadu and the data were collected from the period 2012-15.

Methodology

The well structured questionnaire was used to collect the data from the respondents. 320 questionnaires were distributed and 209 questionnaires were received back. The response rate is 65.31%. The demographic information of the respondents is given in Table 1.

Table 1

Distribution of Respondents Vs Gender

S. No.	Gender	Response and %
1	Female	98 (46.9%)
2	Male	111 (53.1%)
Total		**209 100.0%)**

Table 1 shows that more number of male respondents (53.1%) has been responded than the female respondents (46.9%) the reason is majority of DCLs users are male.

"An Over View of the Implementation of Precision Farming Projects in Tamil Nadu, India"

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Abstract

The major problem for the failure of agricultural sector in India is believed to not taking the modern methods and innovations from the knowledge quarters to the agricultural field. Without the meeting of technology and ground level implementation, the benefits of modern technology and science cannot be optimal. Unsuitability of technology given the local agro-climatic conditions, unawareness of technology due to a communication gap, unwillingness to take unknown risks due to lack of trust, lack of knowledge, cultural barriers, lack of adequate credit of support for investment which is a prerequisite to the adoption of technology, to overcome these barriers, sound management of the technology dissemination need to be followed. The demonstration conducted by the Official of the project at Krishnagiri block, in Pennaiyar river sub basin, Alapatti tank in Krishnagiri district reveals that the initial demonstration implemented in the period of October 2008 to March 2009 with the 39 farmers and covered 26 hectare. The sustainability is very important aspect to measure the success or failure of the precision farming in the implemented area hence 134 farmers with 40 ha coverage showed that the real demonstration effects on farmers were adopted and sustained with precision farming through the year with various multi crops cultivated by the farmers because of higher yield, least inputs and more than that huge income from the farm. Followed by the last year Oct 2011 to Mar 2012 the total area of demonstration covered 110 ha and the impact also 110 ha with the overall demonstration which spread across the area with the total sustainability area is 448 ha.

Key Words

Precision Farming, Modern Technology, Adoption of Technology, Sustainability.

A STUDY ON CONSUMER PERCEPTION ON SHOPPING MALLS IN CHENNAI CITY

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ABSTRACT

In India, retail shopping through malls is taking the highest preference. In Tamilnadu, Chennai is the most favourite place for shopping malls. Spencer Plaza is the oldest mall originally built during the period of the British Raj and reconstructed in 1985. In Chennai, Phoenix market city, Express Avenue, Forum mall, Abirami megamall, Ampa skywalk mall, Alsa mall are the big players trying to establish their market share in the city. The buying behaviour and the perception of consumers shifting their buying patronage and loyalty from traditional unorganised retailing to organised retailing such as malls have to be investigated. The current study concentrates on analysis of consumer buying behaviour and perception towards malls in Chennai. The main factor that determines the buying behaviour and perception is the consumer's buying power. The study results clearly indicate that consumers have gained lots of benefits from the malls on multiple counts such as wider choice of products and brands for shopping, one stop shopping, festive offers and discounts, fun and entertainment, junction for get together and family outing etc. Age of the consumer, family income and purchasing power are the most important factors that impact the buying behaviour of the consumers. The study reveals that almost all age group of consumers with varying income levels visit the malls with their friends and family for different reasons. From the consumers' perspective, availability of more quality products and more number of malls is preferred.

keyword – Consumer Perception, Buying Behaviour, Purchasing Power, Shopping Mall

INTRODUCTION

Customer perception is defined as the way customers usually feel or view certain products or services. It is a marketing concept that encompasses customer's impression, awareness and consciousness of a product or service or a company. It is only when the company is aware of its customer's perception on its products, services or brand, it can truly understand whether the company is going in the right direction or not. Everything what the customers see, hear and experience is linked together and forms their overall perception of the company. One of the best ways to raise the service level is by knowing the customers perceptions. The concept of customer perception is built up by customer experiences, how they perceive the service they are offered and ultimately whether they actually are satisfied with their experiences or not. Even though exposed to the same thing, in the same environment, two persons will never experience the same. The whole perception process is made up by three stages, namely the exposure stage, the attention stage and the interpretation stage.

A shopping mall is a building that contains complex of retail units representing merchandisers and a multiplex of interconnecting walkways enabling visitors to walk from unit to unit offering diverse brands and utilities at the same place. It is a modern indoor version of a traditional marketplace.

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The Cost of Absenteeism and the Effect of Demographic Characteristics

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Abstract

Employee's absenteeism, being serious financial burden for businesses which wish to continue their struggle in tough competitive conditions of today, has become a very important issue to be resolved. In this work, absenteeism of employee of Technical Training Institution, Chennai. The goal of this paper is to present relationship between demographic characteristics, department and absenteeism, and the cost of absenteeism to the company. In order to test the hypothesis suggested, three different regression models have been constructed. As results of study, whereas absenteeism is related to educational level, the number of children and department, it is not related with tenure.

Keywords: Absenteeism, Demographic Characteristics, the Cost of Absenteeism.

Introduction

Today, businesses are required to increase productivity while decreasing their expenses. Absenteeism, low performance level, severance and distrustful behaviors are the behaviors that influence the productivity and efficiency of business enterprices (Örücü and Kaplan, 2001:94). Such behaviors brings high costs to companies and therefore are the issues that must be monitored and dealt with properly. Worker absenteeism accounts for much lost work-time and therefore has important implications for both firm income and productivity (Brown, Fakhfakh and Sessions, 1999:234). Absenteeism is one of the greatest expenses organizations pay, representing about 57% of total value of goods and services produced. This expense is rapidly increasing each passing day. On average, absenteeism cost organizations about Rs. 50,000 per employee in 1997 and about $ 660 per employee in 2005 (Keller, 2008:2). The total costs of absenteeism is calculated at $7,500 per employee per year- almost $300 billion per year for corporate America and more than $3,350 per employee per year-almost 150 billion per year for Canadian businesses (Navarro and Bass, 2006; MacNamara, 2003; Keller, 2008). These results indicate that absence causes how the significant costs for businesses.

Therefore understanding the factors that cause absenteeism may help managers to better manage employees's absences, resulting in increased productivity and profitability. When literature is examined, it is seen that most of studies dealing with employee absenteeism have been carried out. Johns (2001) and Harrison and Martocchio (1998) group literature by the type of data that is used to explain absence. The classes of data are following: (1) personality, (2) demographic characteristics, (3) job-related attitudes, (4) social contex, and (5) decision making mechanisms. The main conclusion they draw from this rather extensive literature is that absenteeism has different origins for different people, times, and contexts'. The importance of demographic characteristics in explaining absenteeism was acknowleged with the appearance of Price's (1995) model (Rosenblatt and Shirom,2005). According to Price (1995) demographic characteristics direct affect absenteeism. First, if any demographic variable is found to be causally related to absence behaviour, research may proceed to examine the possible role of specific mediating variables (job satisfaction, motivation e.g.) in the direct effect thus covered (Rosenblatt and Shirom, 2005: 210).

Most of researchers have been advanced demographic characteristics as predictors of absenteeism in several models. Dozens of studies have accumulated in which gender, age, tenure, education level, and family characteristics were measured, and because there was a growing recognition that some of these characteristics consistently predicted absence-taking (Cohen and Golan, 2007; Hayes, O'Brien- Pallas, Duffied, Shamian, Buchan, Huges, Spence Lanschinger, North, and Stone, 2006; Rosenblatt and Shirom, 2004; Harrison and Martocchio, 1998; Rentsch and Steel, 1998; VandenHeuvel and Wooden, 1995; Kristensen, 1991). Jensen and McIntosh (2007) found that days absent for both men and women are correlated with variables which describe their individual characteristics. These are gender, age, educational attainment, occupation, sector, the number of children living at home, health status, and job duration with organization for which they work and the duration

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An Understanding of XBRL Procedures for Improving the Future of Business Reporting

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ABSTRACT

In this era of globalization, comparison, analysis and interpretation of financial statements is very difficult on a global platform. So, this paper aims to understand the concept of eXtensible Business Reporting Language (XBRL) which is an open standard, independent and international for understanding the financial and economical information in an effective and efficient manner. The mandatory requirements for filing reports in XBRL format as per the provisions of the Companies Act of 2013 and the benefits of using XBRL would be discussed in this paper. This taxonomy serves every accounting and extra- accounting information made by the company. Thus by being in tune with the modern filing requirements as per the demands of the international accounting policies, would help Indian companies to move towards a more organized work culture and achieve transparency and efficacy.

INTRODUCTION

XBRL is a data-rich dialect of XML (Extensible Markup Language) which is the universally preferred language for transmitting information via the Internet. XBRL provides a common, electronic format for business reporting. It helps to communicate financial information over the web faster, easier, and more reliable. It was developed specifically to communicate information between businesses and other users of financial information, such as analysts, investors and regulators. It does not change what is being reported but it only changes the manner of reporting. XBRL helps in enhancing business performance by improving transparency and accountability through the use of digital data exchange.

In XBRL, information is broken down into unique items of data (e.g., total assets = 100). These data items are then assigned mark-up tags that make them computer-

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பாரதி கட்டுரைகளில் வறுமை ஒழிப்புச் சிந்தனைகள்

முனைவர். ம.சியாமளா,
உதவிப்பேராசிரியர், தமிழ்த்துறை, கிருஷ்ணசாமி மகளிர் அறிவியல், கலை மற்றும் மேலாண்மையியல் கல்லூரி, கடலூர், தமிழ்நாடு, இந்தியா.

முன்னுரை

பாரதியின் கட்டுரை, கவிதைப் போன்று அழகு வாய்ந்தது;
கவிதையோ, கட்டுரை போன்று எளிமை வாய்ந்தது.

பாரதி தமது வாழ்வை எண்ணாமல் தம் நாட்டினையும், தம் நாட்டு மக்களையும் தனது குடும்பமாய் கொண்டு வாழ்ந்த சமூகச் சிந்தனையாளன். பாரதி மரபுரீதியான ஒரு தமிழ்க் கவிஞர் மட்டுமல்லர். ஒரு கவிஞர் என்பதற்கும் மேற்பட்ட பன்முகப் படைப்பாளுமைக் கொண்டவர். அவரது கட்டுரைகளின் நடையும், கருத்துக்களும் தமிழ் இலக்கியத்திற்கு வளம் சேர்ப்பவை; தமிழ் சமூகத்திற்கு நலம் சேர்ப்பவையாகும். அவர் தமது கட்டுரைகள் வாயிலாக பல்வேறு கருத்துக்களை மிக விரிவாகவும், தெளிவாகவும், வழிகாட்டக் கூடிய வகையிலும் எடுத்துரைத்துள்ளார். அவரது கவிதைகளில் இடம்பெற இயலாமற்போன பல்வேறு சமூகச் சிந்தனைகளை கட்டுரைகள் வாயிலாக மிக அற்புதமாக எடுத்துரைக்கின்றார்.

இந்தப் படைப்புத் தன்மைதான் மற்ற படைப்பாளிகளிடமிருந்து பாரதியை வேறுபடுத்தி உயர்த்திக் காட்டுகிறது. பாரதியின் கட்டுரையைப் படிப்போர் தம் அறிவிற்கு உள்ளொளிப் பாய்ச்சி நெஞ்சிற்கு உரமூட்டும் ஆற்றல் வாய்ந்தது.

பாரதியின் கட்டுரையில் மூடநம்பிக்கை எதிர்ப்பு, சாதி எதிர்ப்பு, பழமை - புதுமை குறித்த பார்வை, மதஒற்றுமை, வரதட்சனை, வறுமைக் கொடுமை, பெண்ணியச் சிந்தனை, கல்விச் சிந்தனை, கலை - இலக்கியச் சிந்தனை, தொழிலாளர் நலன் மேலும் பல பொதுவான சமுதாயச் சிந்தனைகள் குறித்து விளக்கமாக கூறுகிறார்

இத்தகைய சமூகப் பிரச்சனைகளில் பாரதியை மிகவும் மனம் வருந்தச் செய்வது **வறுமை**. இந்த நாட்டு மக்களின் வறுமை நிலை குறித்து வரலாற்று ரீதியாகவும், வறுமைக்கான காரணங்கள் குறித்தும் மற்றும் வறுமையைப் போக்கும் வழி குறித்தும் பாரதி விரிவான பார்வையோடு தம் கட்டுரைகளில் விவரித்துள்ளதை இக்கட்டுரையில் காணலாம்.

வறுமையெனும் கொடுந்துன்பம்

மனித குலத்திற்கு மிகப் பெரும் கொடுமையாயிருப்பது வறுமையே; பல்வேறு சமூகக் குற்றங்கள் தோன்றக் காரணமாக இருப்பது வறுமையே. எனவே வறுமையின் துன்பத்தைத் தம்முடைய கட்டுரைகளில் அவர் மிகத் தெளிவாகக் கூறுகிறார்.

இந்த உலகிலுள்ள எல்லாத் துன்பங்களைக் காட்டிலும் வறுமைத் துன்பம் கொடியது. இவ்வுலகத்தில் எல்லாச் சிறுமைகளைக் காட்டிலும் ஏழ்மையே அதிகச் சிறுமையாவது.

என்று வறுமையின் துன்பத்தைப் பற்றிக் கூறுகிறார் பாரதி.

இந்தியாவில் வறுமைக்கான அகக்காரணங்கள்

நம் நாட்டில் வறுமை தோன்றவும், அது தொடர்ந்து நிலவி வருவதற்கான காரணங்கள் பற்றி ஆழ்ந்து சிந்திக்கும் பாரதி அதற்கான மனோரீதியான காரணங்களை இவ்வாறு வகைப்படுத்துகிறார்.

நமது தேசத்தில் வறுமை அதிகம். முன்னேயிருந்தவர்களின் கோழைத்தன்மை, ஒற்றுமைக் குறைவு, சாஸ்திர ஞானமில்லாமை, பலதேச விவகாரங்கள் தெரியாமை, மூட கர்வங்கள் முதலியவற்றால் லட்சுமியை இழந்தோம். மேற்படி குணங்கள் இன்னும் நம்மைவிட்டு நன்றாக நீங்கவில்லை.

சமூகத்தின் பிற சாதி மக்களால் ஒடுக்கப்பட்டவர்கள், தங்களை ஒடுக்கியோர்க்கு எதிராகப் போரிடத் துணியாமையைக் கோழைத்தன்மை எனலாம்; ஒடுக்கப்பட்ட மக்கள் ஒன்று சேர்ந்து செயல்பட முன் வராமையே ஒற்றுமைக் குறைவு எனலாம்; கல்வியறிவில்லாமையே சாஸ்திர ஞானமில்லாமையாகும்; கல்வி அறிவில்லாமையே பிற நாட்டில் இத்தகைய மனித இழிவு இல்லை என்று உணர முடியாமைக்குக் காரணம்.

'மூட கர்வம்' என்று பாரதியாரால் குறிப்பிடப்படுவது செல்வந்தரிடம் தங்களது உரிமைகளுக்குப் போராடுவதில் ஏழை மக்களிடம் இருந்த மனத்தடைகளே எனலாம். மேற்கண்டவாறு பாரதி கூறும் அகக்காரணங்கள் யாவும் வறுமையை இந்தியச் சமுதாயத்தில் தொடர்ந்து நிலை நிறுத்திடப் பெரிதும் உதவிசெய்து வருகின்றன எனலாம்.

இந்தியாவில் வறுமைக்கான புறக்காரணங்கள்

விளைநிலம் ஒருசிலர் கையில் மட்டும் அடங்கிக் கிடப்பதனையே வறுமைக்கு முதலாவது சமூகக்காரணம் என்பதை பாரதி தெளிவாக உணர்ந்திருக்கிறார்.

செல்வர் ஸகல ஜனங்களுக்கும் பொதுவாகிய பூமியைத் தங்களுக்குள்ளே பங்கிட்டெடுத்துக்கொண்டு பெரும் பகுதியார் சோறின்றி மாளும்படி விடுகிறார்கள்.

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RESEARCH ARTICLE

Therapeutic properties of a poisonous plant *Cleistanthus collinus*

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ABSTRACT:
Cleistanthus collinus (Roxb.) Benth. ex Hook. f. is a familiar plant which is available in many parts of India. It is commonly known as Oduvanthalai in Tamil. Though, this plant is widely used for suicidal purposes, it is now increasingly investigated for its therapeutic properties in the area of phytochemical research. The present study is designed to check the antimicrobial properties of *Cleistanthus collinus* leaf extract against the pathogens like Methicillin Resistant *Staphylococcus aureus* (MRSA), Enterococcus and Candida spp.. Mostly these pathogens are the causative agents for skin infections and urinary tract infections. *Cleistanthus collinus* leaves were collected and the crude extract was prepared using various organic solvents and water. Thin layer chromatography with suitable stationary phase and mobile phase was employed to check the presence of active principles of the plant leaves. One of the chief active principles, Cleistanthin A was isolated and partially characterized using chromatography methods and spectroscopy analysis. Antioxidant assay was also performed with the plant extract. The results reveal positive medicinal properties of the plant leaves.

KEYWORDS: *Cleistanthus collinus*, Skin infection, Cleistanthin A, Antimicrobial assay, Antioxidant assay.

INTRODUCTION:
Among various needs and desires, living a healthy life always remains on top of everyone's desire, since nothing could worth better than health. Hence, the ultimate intention for most of the research is the wellbeing of all forms of life on earth. In all age of human life, we relied on plants for most of our basic needs (David J. Newman, 200). Recent advancement in drug development technology significantly increased the interest on natural products (Frank E. Koehn, 2005). Currently, More than 100 numbers of anticancer and anti-infective drugs of plant origins are in clinical drug development stages (Alan, 2008).

Cleistanthus collinus (Benth and Hook F. 1887) is an interesting type of plant, which is usually known as Oduvanthalai in Tamil. It's a kind of shrub grows on hot hill side area in most parts of rural India. The active principles of the plant *C. collinus* were isolated and reported by various groups worldwide.

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The chief chemical constituents of the plant leave *Collinus*in, Diphyllin, and Cleistanthin was reported (Govindachari et al. 1969). Later, Cleistanthin was renamed as Cleistanthin A, after another similar type of compound from the same plant was found and lately isolated compound was named as Cleistanthin B (Laxmi et al., 1970).

The most interesting part of this plant relies on its dual performance. One part of report highlights their toxicological profiles. Especially, the leaves are widely used for suicidal purposes in rural area. The consumption of leaves results in renal tubular dysfunction (dRTA) (Delinda et al., 2010), acute respiratory distress syndrome (ARDS), hypokalemia, cardiac abnormalities, renal failures, metabolic acidosis etc (Benjamin et al., 2006). However, the other research groups pointed out the therapeutic potentials like insecticidal (Bharti Ahiwar., 2011), larvicidal (Ramar et al., 2014), antimicrobial (Kalaivanan et al., 2014), antifungal and antiseptic (Maji et al., 2010), diuretic (Parasuraman et al. 2012) and anticancer properties (Pradheep kumar CP, 1999) of the same plant.

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CRUSTACEAN EXOSKELETON PIGMENT AS BIO BASED PRODUCT

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Key words:
Sustainable utilization, Crustacean shell waste, Astaxanthin.

Abstract

The positive economic development of any country lies in the sustainable utilization of the natural resources and also by greatly reducing the carbon foot printing. Indian subcontinent has a huge untapped human resource and along with this resource if natural bio resources are also managed in a judicious manner a true positive GDP can be achieved. In today's scenario human resources are pushed to an extreme level and as the result of which human race is facing quite a number of disorders. If these stress levels are greatly reduced, just by diet management, health status can be improvised and thus this will lead to a positive economic growth. Due to the increase in the crustacean cuisines, the shell waste of these has also increased. When it is let undegraded in our environment undergoes putrefaction and leads to health concerns. These shell waste are good source of a good bioactive compound called as astaxanthin. Astaxanthin has been proven to exhibit 6000 time better antioxidant property than vitamin C. The commercial products which contain astaxanthin is sold at sky rocketing price, which is mainly due to the extraction process. Thus astaxanthin even though has good biological applications is not available to develop more bioactive products. When astaxanthin is extracted from the crustacean exoskeleton waste, then waste management is achieved, the commercial products that contain astaxanthin can be produced at low price. Thus a high value product can be sold at low price.

INTRODUCTION:

We are living in an era where we have utilized fossil fuel and generated increased carbon foot printing. This has resulted in climate mitigation. The only way to curtail the climate change and protect our mother earth is by switching over to the bio-based economy. A bio-based economy is one in which the economy of a country is based upon sustainable utilization of the natural resources and through which the carbon foot printing can be immensely reduced (http:// www. auri.org /assets /2012 /08/Biobased-Study-Informa.pdf). The bio-based economy focuses on biological tools and products from renewable resources to create wealth and sustainability in the production of medical treatments, diagnostics, more-nutritional foods, energy, chemicals, and materials, while improving the quality of the environment. Every Country

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RESEARCH ARTICLE

Anticancer property of Colchicine isolated from *Indigofera aspalathoids*

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ABSTRACT:
The chief goal of our current research was to establish the anticancer property of Colchicine, a fresh compound isolated from *Indigofera aspalathoids*. Hep3B cell lines were treated with Colchicine for 24 hrs, 48 hrs and 72 hrs. MTT assay was performed to check the degree of cytotoxicity. The morphological changes of colchicine treated cell lines and control groups were observed using phase contrast microscope. Acridine Orange/Ethidium Bromide (AO/EB) double staining, Propidium iodide (PI), were done to check apoptosis of Hep3B cell lines. Cell cycle analysis was employed to determine apoptosis in Hep3B cell lines and degree of apoptosis was quantified using flow cytometry. Colchicine induces cell death in Hep3B cell lines in a dose dependent manner. The IC50 (half maximal inhibitory concentration) value of colchicine on Hep3B cells was calculated as 344.25 µg/ml. Control group cell lines showed normal morphology, whereas the Colchicine treated cells showed altered morphology, also cells were not properly adhered to the culture flask. Colchicine induces apoptosis in Hep3B cell lines. Thus, it could be used as an active member of pharmaceutical or therapeutic concerns for the drug development.

KEYWORDS: Colchicine, Hep3B cell line, *Indigofera aspalathoids*, Cytotoxicity assay, Cell cycle assay, Apoptosis.

INTRODUCTION:

Cancer, a dreadful disease, has the potentials to influence and destroy people physically, physiologically, and psychologically, even economically. Cancer is a condition in which any type of body cell turn into abnormal cell. The range of abnormality cannot be controlled as it involves abnormality in DNA manipulation, functional abnormalities and metabolic abnormalities (Stewart., 2014). Hence, currently cancer can be considered as one of the leading global threats to humans. Now, we are in an era to know at the core level of this abnormality and also to generate personalized therapy without side effects.

Plants hold the credit of being used and investigated for therapeutic purposes in all age of human life (Uma Dvei *et al*., 2013).

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Many of the Indian medicinal plants are also widely investigated (Paolo Scartezzini., 2000). An important difference between the traditional medicines compared with the modern medicines is, mostly crude preparations were used as remedial formulation in traditional treatment methods. But, the modern medicines keenly focus on the specific active principle with its definite mechanism of action.

Considering this fact, we bring into play a traditionally used valuable medicinal plant *Indigofera aspalathoids*, commonly known as Sivanar vembu in Tamil. Previously, we reported the cytotoxic and apoptotic efficacy of silver nanoparticles synthesized from *I. aspalathoids* (Krishnasamy *et al*., 2014). In a CSIR publication, 2001., there an citation which mentions about the antitumor proprety of stem of *Indigofera aspalathoids*. The antitumor efficacy of the ethanol extract of the pant *I. aspalothoides* on the Ehrlich Ascites Carcinoma mice model was reported (Rajkapoor et al., 2004). The anticancer activity of methanol extract

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ANTICANCER PROPERTY OF A PIGMENT EXTRACTED FROM A CRUSTACEAN SHELL WASTE

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ABSTRACT

As patients with cancer conditions are increasing in India tremendously, there is a need for personalized therapies. The mortality of cancer is related to its chemotherapy. Thus there is need for to develop a suitable anticancer therapy with reduced toxicity. Thus in this current work an attempt is made to study the anticancer property of astaxanthin , which is extracted from the dry shell waste of *Fenneropeneaus merguiensis* against PC 3 cell lines, a suitable model for prostate cancer. It has been identified by cell viability assay, by using MTT as the substrate that astaxanthin is able to exhibit the toxicity of PC 3 cell lines even at minimum concentration of 3.12 µg/ml and IC_{50} value as 18.75 µg/ml.

Key words: Astaxanthin, PC 3 cell lines, MTT assay.

INTRODUCTION

India sub-continent is one of the most diversified human populations in world. Cancer rates are low in India, when compared to the human population in other countries. The current trend in India is now slightly shifting and the populations of people who are suffering from oesophageal, prostrate and oral cancer are increasing (Sinha *et. al*., 2003). The increasing rate of certain cancers could be attributed to the change in lifestyle of Indian population. According to medical oncologist in an article in Times of India, September, 29th, 2013; suggested that the current of increase level of prostate cancer in India is due to the consumption of deep fried foods is consumed more than once in a week. This is due to the consumption potential carcinogens such as like acrylamide, heterocyclic amines and polyaromatic hydrocarbons.

Though the mortality due to cancer is high, many advances have been made both in terms of treatment and understanding the biology of the disease at the molecular level (Doll, 2003). The increased number of patients with prostate cancer among Indian population could also be associated with age of the individual (Ganesh *et al*., 2013; Patel *et. al.,* 2013). Prostate cancer is second largest common cancer among men in the world. During the year 2012, 1.1 million men around the world are affected by prostate cancer, among which 70% of cases occur in developing countries and in 1.1 million cases 307,000 cases result in mortality (Girish *et al*., 2014).

Carotenoids are organic soluble substances, present in both animal and plant system. Many carotenoids, such as β-carotene, α-carotene, lycopene, lutein, zeaxanthin, β-cryptoxanthin, fucoxanthin, canthaxanthin and astaxanthin, have been analysed extensively for their anticancer properties (Takuji *et al*., 2012). Among the β-carotene family, astaxanthin has the highest anticancer properties. Carotenoids have good biological properties such as light protection, immunoenhancement and also anticancer activity.

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Comics as a Learning Tool of Indian Tradition

KEYWORDS

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ABSTRACT *This paper attempts to identify the role of comics in the literary tradition of India. It presents an overview of how comics try to influence children and adults. Comics had the disadvantage of having been considered as lowbrow literature. They were looked down and people who associated with them were scorned. This trend has changed steadily. Initially, comics gained acceptance by its inclusion into the realm of children. Later, comics became a part of popular literature and increasingly it has been deemed fit to join the mainstream literature. This paper attempts to explore the possibility of comics as a tool for educating moral values and development in language learning.*

The uniqueness of comics as stories with visual images makes it a great medium to be used for the instruction of moral values in children. Similar to play-way method of education, comics showcase moral values in an attractive package. This charm of comics can be very effective when applied to the education of second language learners. Learning a new language can be made more palatable with the aid of visual imagery and simple sentences. This paper is an attempt to state the possibilities of comics as a visual and literary aid to children and adults.

INTRODUCTION

Comics in India have been perpetuating the rich and varied cultural tradition. In the beginning, comics were wholly a medium of entertainment with no educational purposes. This was changed by the customization of comics suitable to the Indian milieu. For the first time, comics were seen as reader friendly material by children and adults. Comics came to be viewed as literature.

COMICS AS VISUAL LITERATURE

The aim of literature is twin fold. It seeks to entertain and educate. Comics embrace this dual role with ease. The fun side of comics entertain the readers. The text educates the readers. With the use of minimal words, comics are able to captivate the readers' attention. Hence, it makes sense to group comics under visual literature.

UNIQUENESS OF COMICS

Visual images are the strength of comics as they provide a visual treat along with the stories. The human mind can process images faster than text. Images have powerful significance in terms of assimilation of information in one's memory. When the written word is associated with images, information is easier to remember.

The text in comics undergoes a drastic reduction from conventional narratives. The sentences are short and crisp enabling reading comprehension in readers and language learners. Ultimately, the whole narrative process of story-telling is enhanced and readers are able to retain the gist of the stories far more than a mere book.

ORIGIN OF COMICS IN INDIA

In India, comics were introduced in a leading newspaper in the late 1960s.One can trace the origin of comics right back to the time of the age old paintings left by our ancestors. With the advent of publications like Amar chithra katha, Chandmama and Tinkle, the literary realm of India was revolutionised. With the adaptation of the tradition of India into the medium of comics, it was firmly established as literary and art form.

ROLE OF MYTH AND MYTHOLOGY

Comics in India draw from various sources of Indian ethos and culture. They are customized to suit the readers of India. Indian epics and mythology have been one such rich source. The epics and myths have been interpreted creatively in various comics. Indian Mythology has outdone itself by its adaptation to comics. It has currency and appeal even in modern times. Indian culture is enriched by the values and morals showcased in mythology. They instruct one on how to lead a good life. Comics and myths blend in beautifully to present children with knowledge in their developmental years.

WESTERN COMICS

The Western comics thrive on the concept of superheroes fighting for justice, most often using violence. This type of characterization made comics popular enough that, they were adapted to the silver screen. Characters from Marvel comics like Batman and Spiderman are some examples. Similarly, Indian comics found their Western superhero parallels in mythical characters fighting for justice and formed the basis for quite a number of movies. For example, there have been quite a number of animated films based on the comics like Chotta Bheem, Balganesh and Krishna. It was a refreshing change for the Indian readers as they could relate more to these mythical characters.

COMICS AND CHILDREN

Comics in India occupy an integral part in the developmental years of children. It promotes reading in children from an early age. In addition they introduce and thereby aid in instilling moral values in children in an entertaining manner. J.R. Kokandakar(2008) has stated how the instruction of moral values could be done for children.

"The first rule of moral training is to suggest and invite, not to command or impose. The best method of suggestion is by personal example, daily conversation and the books read from day to day. These books should contain, for the younger student, the lofty example of the past given, not as moral lessons but as things of supreme human interest" (56)

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FACTORS INFLUENCING JOB SATISFACTION AND MOTIVATION OF CONSTRUCTION WORKERS IN SALEM DISTRICT

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ABSTRACT

The construction industry is the second largest industry in India after agriculture. It accounts for about 11% of India as GDP. It makes significant contribution to the national economy and provides employment to large number of people. This study is to find out the factors that determined job satisfaction and motivation of construction workers in Salem District. For these purposes the five field semi-skilled workers were selected like Mason, Carpenter, Plumber, Painter and Electricians. Descriptive research method has been used in this present study. Convenience sampling under the non-probability sampling method was used to collect the data. The size of the sample is 100. Samples were collected from construction workers through interview schedule method. The sources of data were primary as well as secondary. The statistical tools are used for T-Test, F-Test, and Factor analysis. There is no significant difference between marital status of the respondents with regard to satisfaction level of construction workers.

Key Words: Construction Workers, Construction Industry, Job Satisfaction,

1.1. Introduction

Studies by Peng, B. L. (2006) the construction industry is not only particularly important, but also different from other industries especially in its pay and labour recruitment practices. In general the rural workers and the construction workers have long suffered from various problems, including delayed payment of salaries and exclusion from urban social security schemes. State policies designed to deal with these problems but in general have mixed success. Partly as a result of the peculiarities of the construction industry, state policy been particularly unsuccessful in dealing with the problems faced by construction workers.

Construction in developing countries is mostly labour intensive using basic hand tools and equipment. For example, about a decade and half ago, it was found that labour costs on contraction projects in the Gaza Strip were between 30% and 50% of the overall project cost (Guhanthakurta and Yates 1993). It therefore stands to reason that a low level performance resulting from job dissatisfaction could therefore be costly to the construction industry.

1.2. What is job satisfaction?

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INVESTMENT BEHAVIOUR AND AWARENESS LEVEL AMONG THE WOMEN TAX PAYERS IN SALEM DISTRICT

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ABSTRACT

The tax payers are having regular saving habits for the purpose of future savings or tax benefits etc., Moreover the tax planning is an essential segment among the women tax payers, tax planning is a legal utilization of tax deduction, exemptions, and rebates. The primary motive of the study is to determine investment behaviour and awareness level among the women tax payers. The nature of data are quantitative as well as qualitative. Descriptive research method is used to describe a characteristic of a group of target population such as area of residence, age group and monthly income, therefore this study follows descriptive research method. The sampling technique are important aspect of every research report, so for this research report based on Non-Probability Under convenience sampling technique. The sources of data are both primary as well as secondary; hence the primary data are collected with help of Self-administered questionnaires throughout the 210 respondents working places in Salem District. The secondary data are collecting various relevant websites and journals. The statistical tools t-test, F-test, Friedman Rank Correlation, Reliability statistics and Factor analysis are used. There is a significant difference among the respondents with different ranges of monthly investment in considering awareness on capital gains and dividends as a factor for awareness level of women investors pertaining to tax planning.

Keywords: *Awareness Level, Investment Behaviour, Tax Payers*

Introduction

The major objectives of Government policy has been the promotion of savings and capital formation in the economy as primary instruments of economic growth. The saving rate of any country is an important indicator of economic development since the domestic saving rate is directly related with the investment rate and the lending capacity of the banking system. Saving and Investment are two key macro variables with micro foundations, which play a significant role in economic growth. Savings means sacrificing the current consumption in order to increase the standard of living and fulfilling the daily requirements in future. Savings are necessary for unpredictable future in order to meet the emergencies in life. Savings refers to that part of income which is not consumed. The term savings also refers to the activity by which

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E-CRM & BANKING

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Abstract
Many companies today are racing to re-establish their connections to new as well as existing customers to boost long-term customer loyalty. Some companies are competing effectively and winning this race through the implementation of relationship marketing principles using strategic and technology-based customer relationship management (CRM) applications. Today marketing is not just developing, delivering and selling, it is moving towards developing and maintaining mutually long term relationships with customers. Relationship marketing is becoming important in financial service. If a bank develops and sustains a solid relationship with its customers, its competitors cannot easily replace them and therefore this relationship provides for a sustained competitive advantage.

Since the early 1990s, the computer, the Internet, and information technology have been merged to become a viable substitute for labour and paper-intensive banking processes between banks and their customers. This has been seen in the widespread use of the ATM, credit cards, debit cards, smart cards, and lending through e-CRM via the Internet. However e-CRM initiatives have resulted in increased competitiveness for many banks as witnessed by higher revenues and lower operational costs. Banks have clearly understood that managing customer relationships effectively and efficiently would boost customer satisfaction and retention rates and with the increasing knowledge of the customers banks are now trying to woo the customer by determining the aspects, which are really vital for them. The aspects may include facilities, reputations, service, operation hours, interest on savings as well as on loan, location of the bank, convenience, friendliness, responsiveness, efficiency of employees, ambience of the banks, etc.

This paper is the outcome of a research which has the primary objective of investigating the customer relationship management activities that exist in e-banking activities in five private banks namely ICICI Bank, HDFC Bank, IDBI Bank, Axis Bank and Yes Bank. The other objectives would be to highlight the differentiation in e-CRM activities as undertaken by these five banks which give them an edge over the other, to identify customer preferences and to know what makes one bank more preferred over another.

Keywords : E-CRM, Banks, Customers, Competition.

INTRODUCTION

Many companies today are racing to re-establish their connections to new as well as existing customers to boost long-term customer loyalty. Some companies are competing effectively and winning this race through the implementation of relationship marketing principles using strategic and technology-based customer relationship management (CRM) applications. Today marketing is not just developing, delivering and selling, it is moving towards developing and maintaining mutually long term relationships with customers. Relationship marketing is becoming important in financial service. If a bank develops and sustains a solid relationship with its customers, its competitors cannot easily replace them and therefore this relationship provides for a sustained competitive advantage.

Customer relationship management (CRM) is one of the fastest growing management approaches being adopted across many organizations. Ovum (Bradshaw andBrash, 2001), an independent research and consulting company, define CRM as: A management approach that enables organizations to identify, attract and increase retention of profitable customers, by managing relationships with them.

According to Light (2001), CRM evolved from business processes such as relationship marketing and the increased emphasis on improved customer retention through the effective management of customer relationships. Relationship marketing emphasizes that customer retention affects company profitability in that it is more efficient to maintain an existing relationship with a customer than create a new one (Payne et al., 1999; Reichheld, 1996).

Customer Relationship Management (CRM) has become a leading business strategy in highly competitive business environment. CRM can be viewed as 'Managerialefforts to manage business interactions with customers by combining business processes and technologies that seek to understand a company's customers' (Kim, Suh, & Hwang, 2003). Companies are becoming increasingly aware of the many potential benefits provided by CRM. Some potential benefits of

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PERFORMANCE ANALYSIS OF K-MEANS ALGORITHMS IN WEBLOG DATA

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Abstract—Web mining is used to discover interest patterns which can be applied to many real world problems like refining web sites, better understanding the user behavior, product approval etc. Data mining software is one of a number of analytical tools for analyzing data. In this paper we are studying the various clustering algorithms for segmentation model. The basic idea of clustering is to define the similarity between the distance, the distance that represents the data between the data to measure the similarity of the size of the data are classified, until all the data gathering is completed. Cluster analysis or clustering is the task of assigning a set of objects into groups (called clusters) so that the objects in the same cluster are more similar to each other than to those in other clusters. Our main aim to show the performance of K-means algorithm and will be most suitable for the users.

Keywords—Web Mining, K-means algorithms, Clustering methods.

1. INTRODUCTION

Data mining is a new kind of data processing technology and efficiently extracts useful information [1]. Data mining it is an Extraction of hidden, analytical information from large databases .It is also called as Knowledge Discovery from Databases .It performs an Identification and assessment of hidden patterns in database [1]. Web mining can be classified into three areas: 1) Web content mining: refers to discovery of useful information from web page contents i.e. text, multimedia data like images, audio, video etc. 2) Web structure mining: it refers to analyzing, discovering and modeling link structure of web pages and/or web site to generate structural. 3) Web usage mining deals with understanding user behavior while interacting with web site, by using various log files to extract knowledge from them.

One of the most important tasks of Web Usage Mining is web user clustering which forms groups of users presenting having common welfares and behavior by analyzing the data collected in the web servers. The K-means is most popular algorithm for clustering and well known for its simplicity and low time complexity [1]. However, it has some major drawbacks like quality of the resulting clusters heavily depends on the selection of initial centroids, clusters produced are of varying sizes, hence unbalanced and may also lead to empty clusters.

2. WEB USAGE MINING PROCESS

The main aim of the innovation system is to find web user clusters from web server log files [2]. These discovered clusters show the characteristics of the underlying data distribution. Clustering is useful in characterizing user groups based on patterns, categorizing web documents that have similar functionalities.

This method allows for the collected works of Web log information for Web pages. This usage data provides the paths leading to accessed Web pages [2]. This information is often gathered automatically into access logs via the Web server

Web Usage Mining is a four-step process. The first step is data collection, the second step is data pre-processing, the third step is pattern discovery and the last step is pattern analysis.

2.1 PREPROCESSING

The pre-processing stage involves cleaning of the click stream data and the data is partitioned into a set of user transactions with their respective visits to the web site. “Consists of converting the usage, content, and structure information contained in the various available data sources into the data abstractions necessary for pattern discovery”.

It performs a series of processing of web log data covering data cleaning, user identification, session identification, path completion and transaction identification.

2.2 DATA CLEANING

It is the process of removing irrelevant items such as jpeg, gif, sound files and references due to spider navigation to improve the quality of analysis. User Identification is the process of identifying users by using IP address and user agent fields of log entries. A user session is considered to be all of the page accesses that occur during a single visit to a Web site.

2.3 PATTERN DISCOVERY

It is the process of removing irrelevant items such as jpeg, gif, sound files and references due to spider navigation to improve the quality of analysis. User Identification is the process of identifying users by using IP address and user agent fields of log entries. A user session is considered to be all of the page accesses that occur during a single visit to a Web site.

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Performance Analysis of K-Means and Bisecting K-Means Algorithms in Weblog Data

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Abstract – Web mining is used to discover interest patterns which can be applied to many real world problems like refining web sites, better understanding the user behavior, product approval etc. Data mining software is one of a number of analytical tools for analyzing data. In this paper we are studying the various clustering algorithms for segmentation model. The basic idea of clustering is to define the similarity between the distance, the distance that represents the data between the data to measure the similarity of the size of the data are classified, until all the data gathering is completed. Cluster analysis or clustering is the task of assigning a set of objects into groups (called clusters) so that the objects in the same cluster are more similar to each other than to those in other clusters. Our main aim to show the comparison of the different- different clustering algorithms of segmentation model and find out which algorithm will be most suitable for the users.

Index Terms – Web Mning, K-means algorithms, Bisecting K-means algorithm, Clustering methods.

1. INTRODUCTION

Data mining is a new kind of data processing technology and efficiently extracts useful information [1]. Data mining it is an Extraction of hidden, analytical information from large databases .It is also called as Knowledge Discovery from Databases .It perform an Identification and assessment of hidden patterns in database [2]. Web mining can be classified into three areas: 1) Web content mining: refers to discovery of useful information from web page contents i.e. text, multimedia data like images, audio, video etc. 2) Web structure mining: it refers to analyzing, discovering and modeling link structure of web pages and/or web site to generate structural. 3) Web usage mining deals with understanding user behavior while interacting with web site, by using various log files to extract knowledge from them.

One of the most important tasks of Web Usage Mining is web user clustering which forms groups of users presenting having common welfares and behavior by analyzing the data collected in the web servers [3]. The K-means is most popular algorithm for clustering and well known for its simplicity and low time complexity [4]. However, it has some major drawbacks like quality of the resulting clusters heavily depends on the selection of initial centroids, clusters produced are of varying sizes, hence unbalanced and may also lead to empty clusters. Bisecting k-means is modification over basic k-means algorithm. As Bisecting k-means is based on k-means, it keeps the merits of k-means and also has some advantages over k-means. Clustering is the task of assigning a set of objects into groups (called clusters) so that the objects in the same cluster are more similar (in some sense or another) to each other than to those in other clusters [1].

2. WEB USAGE MINING PROCESS

The main aim of the innovation system is to find web user clusters from web server log files [5]. These discovered clusters show the characteristics of the underlying data distribution. Clustering is useful in characterizing user groups based on patterns, categorizing web documents that have similar functionalities.

This method allows for the collected works of Web log information for Web pages. This usage data provides the paths leading to accessed Web pages [6]. This information is often gathered automatically into access logs via the Web server

Web Usage Mining is a four-step process. The first step is data collection, the second step is data pre-processing, the third step is pattern discovery and the last step is pattern analysis.

2.1. Preprocessing

The pre-processing stage involves cleaning of the click stream data and the data is partitioned into a set of user transactions with their respective visits to the web site. “Consists of converting the usage, content, and structure information contained in the various available data sources into the data abstractions necessary for pattern discovery”[7].

Performs a series of processing of web log file covering data cleaning, user identification, session identification, path completion and transaction identification.

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Similarity Measurement Of Web Navigation Pattern Using K-Harmonic Mean Algorithm

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Abstract— we present a new method to improve the web Navigation Usage Pattern to discover the web data based on similarity between two cluster points. The web usage patterns can be extracted from Web server logs regularly verified for working websites by first handling the log data to find users, user sessions, and user task-oriented transactions, and then applying a Web usage mining algorithm to determine patterns among web usage paths. In conventional Web usage mining, semantic information of the Web page content does not take part in the pattern generation process. The web navigation usage pattern including information about both the path and time essential for user-oriented tasks. It is taken by our ideal user communicating path models. It can be measure to distance between similar web usage patterns. In this approach, the user visited pages are subdivided into clusters using a non-Euclidean distance measure called the Sequence Order Method (SOM) and Euclidean method measure called Association Distance Measure (ADM). In this paper mainly focus to identify page path similarity, and implementing KHM clustering algorithm. The minimum number of pages in a session and similarity of usage path were calculated.

Keywords— Web Data Mining; Pattern Discover; Web Log data; Classification of Users, Association Rules, clustering algorithm(KHM).

1.INTRODUCTION

The World Wide Web has developed the biggest and the most popular way of communicating, retrieving and circulating information. The number of Web pages available is increasing very rapidly adding to the hundreds of millions pages already on-line. The rapid and chaotic growth has resulted into more complex structure of Web sites. Web mining are classified in three categories 1) Web Structure Mining 2) Web Content Mining 3) Web Usage Mining.

Web Structure Mining is the task for discovering knowledge from the structure of hyperlinks within Web pages and given useful information for the relationship among Web pages. Web Content Mining is the task of discovering different kinds of information contents and improving efficient mechanisms to organize and grouping (clustering) multimedia content to the search engines for accessing these contents by using keywords, categories, related contents etc. When a web user visits a website, for one request ordered by the user one or more than one record of the server is stored in the web access log [2]. The analysis of such data can be used to understand the user preferences and behavior in a process commonly referred to as Web Usage Mining.

Web usage mining is the application of data mining techniques to discover usage patterns from Web data, in order to understand and better serve the needs of Web-based applications [5]. Web usage mining consists of three phases, namely preprocessing, pattern discovery, and pattern analysis. SOM is compared to a commonly used distance measure within cluster analysis called association distance measure, which does not incorporate structural information[3].

2.PRINCIPLES OF WEB USAGE MINING

Web usage mining Process

Web usage mining is the task of applying data mining techniques to discover usage patterns from Web data in order to understand and better serve the needs of users navigating on the Web. As every data mining task, the process of Web usage mining also consists of four main steps: (i) data gathering, (ii) preprocessing, (iii) pattern discovery and (iv) Pattern analysis[2].

- Data gathering or information gathering: This is done mostly by the web servers; however there exist Methods, where client side data are collected as well.

- Preprocessing: (i) Data Cleaning. As in all information discovery processes, in web usage mining can also be happen that such data is recorded in the log file that is not useful for the further process, or even ambiguous or faulty. These records have to be corrected or removed. (ii)User identification. In this step the unique users are distinguished, and as a result, the different users are identified. This can be done in various ways like using IP addresses, cookies, and direct authentication and so on. (iii)Session identification. A session is understood as a sequence of activities performed by a user when he is

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Ideal Sampling Rate to reduce distortion in Audio Steganography

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Abstract

This report presents a method to embed and extract digital data in an audio file using LSB embedding technique. The intended use of this system regards for reducing noise level that is added during audio steganography process. The aim was to study the effects of sampling rate on audio cover during the process of digitization.

The motivation came from our human auditory system (HAS) which is sensitive towards distortions added during steganography process and making the process suspicious. We first show how to embed the text data into audio file by LSB embedding techniques by applying cipher key. Basic audio sampling is discussed. We further segment audio by using Nyquist–Shannon sampling theorem. The report concludes that our system successfully preforms audio steganography with decreased noise level in terms of Signal to Noise Ratio (SNR) when sampled at the rate proposed in Nyquist–Shannon techniques.

Keywords: Audio Steganography; Sampling-Rate; SNR; HAS; LSB; Nyquist–Shannon techniques;

1. Introduction

Steganography is the art of hiding data over a medium and make it undetectable. In this report basic steganography processes like encryption of text data into audio signal (.wav) and decryption was carried out using Least Significant Bit (LSB) encoding technique along with cipher key authentication process. A clear understanding of the noise that gets added in the audio signal when the text is embedded using steganography process is discussed. This paper presents the effect of SNR value on different sampling rate.

In this work, uses LSB encoding technique which is simple and easy way of embedding and better imperceptibility. At the receiving end the embedded data is extracted without knowledge of the original audio. Proposed system is implemented and tested for different sampling sizes and performance is evaluated using SNR values comparison. Our main contribution is to have a perfect sampling rate for different audio type.

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Noise Feature Analysis of hiding data in Audio Steganography

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ABSTRACT

Steganography is the art of hiding data and make it undetectable. The data hidden is only known to the receiver and the sender. Here, basic steganography processes like encryption of text data into Audio signal (.wav) and decryption was carried out using LSB method. The basic aim of the problem analysis is to obtain clear understanding of the noise in the audio signal when the text is embedded using steganography process; this is done because the noise is easily detected by human ears. This paper presents the difference in wavelets under single tone, multiple tones and drastic change while using Low pass filters of Audio Signal Processing. Noise features assessment is carried out for further processing.

***IndexTerms*— Audio Steganography, LSB method, Single tone, Multiple tone, Audio Noise, Digital Signal Processing.**

1. Introduction

1.1 Audio Steganography

Audio Steganography technique aims embedding data in a secured way in a medium like text, image, audio, video etc., and then extracting back by authorized people. Hence, it is essential in digital audio steganography to obtain robust high capacity systems [1].

- Capacity is the amount of data that can be hidden in the audio file.
- Security is the authentication check and doubtless transmission of hidden data.
- Robustness is the noise that occurs by manipulating audio cover.

Audio wavelets may have single frequency or many frequency compositions as given below:

1) Single Tone Signal

A signal tone Signal is a steady periodic sound (not necessarily a pure tone) used to indicate a condition as an audible warning.

2) Multiple Tones Signal

It is the composition of several sine waves, each having distinct amplitude, phase and frequency. A Multitone signal is useful for testing the frequency response of a system quickly.

Audio quality Assessments [2] can be carried out by features discussed below:

1.1.1 Signal to Noise Ratio

Signal-to-noise ratio (SNR) is a measure used in Digital Signal Processing (DSP) which compares the level of a desired signal (here, audio signal) to the level of noise. It is defined as the ratio of signal power to noise power (in decibels).

$$SNR = \frac{P_S}{P_N} \quad (1)$$

1.1.2 Power Ratio

Noise power ratio (NPR) is a method for evaluating the linear performance of stenography

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Secure Intrusion-Detection System in Mobile Adhoc Networks

G. Suseendran, A. Sasi Kumar • Published 2016 • Computer Science • Materials Engineering eJournal

Objectives: This paper proposes the new idea of intrusion detection system to improve the security in mobile adhoc networks. Methods/Analysis: Intrusion is defined as form of undesirable hobby occurred in community that's affecting the integrity and confidentiality of community. The present intrusion detection method superior Adaptive Acknowledgement Scheme (EAACK) takes longer time for encrypting facts and signature length is also large which creates network overhead. Findings: In proposed... Expand

Topics from this paper

- Intrusion detection system
- Encryption
- Confidentiality
- Overhead (computing)
- Interrupt
- Routing
- Experiment
- Design review (U.S. government)

One Citation

A secured multiplicative Diffie Hellman key exchange routing approach for mobile ad hoc network

T. Manjula, B. Anand • Computer Science • J. Ambient Intell. Humaniz. Comput. • 2021

TLDR Security simulation by deployment of the already existing Routing otherwise known as SUPERMAN with IPSec, secure ad hoc on-demand distance vector (SAODV) and secure optimized link state routing (SOLSR) are taken into account in order to show that the proposed frameworks of MDKESR with respect to security which is a wireless communication are feasible. Expand

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Original Article

EdTAM: Efficient Detection of Theft Android Mobile

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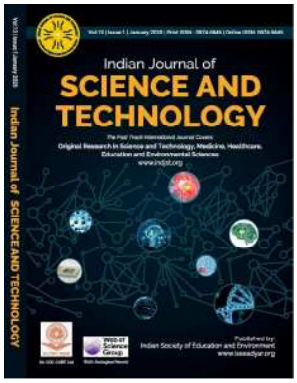

Year: 2016, Volume: 9, Issue: 44

ABSTRACT

Objectives: This paper describes to improve the android mobile device theft tracking technique Methods/Statistical Analysis: The proposed framework uses SMS in offline, MMS in online and Camera (Front) to capture the picture. The user has to provide the alternative mobile number and email ID after installing the application. The application start working on its background and it check for the IMSI (SIM card) number, if the SIM changes and take the snapshot by using Camera and send the SMS to the alternative number without his/her knowledge. Findings: The SMS contains the new SIM number and we can track the mobile. GPS system is used to identify the location. Application/ Improvement: The existing technique that runs always in background which leads memory leak, but here the system will start whenever mobile instrument restart or change the SIM card and start works.

Keywords: Global Positioning System (GPS), International Mobile Subscriber Identity (IMSI), Multimedia Message Service (MMS), Short Message Service (SMS)

Incremental Quality Based Reverse Ranking for Spatial Data

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Date Written: January 1, 2016

Abstract

Background/Objectives: The scope of this proposed work is to minimize the search time and complexity in spatial database. Methods: Improves the query processing in spatial database by using the existing R Tree, IR Tree and Reverse Ranking. A comparative analysis is made between the existing methods and the proposed method Incremental Quality Reverse Ranking (IQRR). The proposed method effectively evaluates to find the top-k spatial objects in multiple query processing. Findings: To evaluate the performance of the proposed approach, a comparative study has been performed in this work. The R tree and IR tree are compared with the proposed work namely Incremental Quality Reverse Ranking (IQRR). The evaluation parameters are radius, time, location, directions and number of dams. Applications: A spatial preference query ranks objects (e.g. Dams) based on the qualities of features (irrigation, water supply, flood control, hydroelectricity, navigation, recreation and pollution control) in their spatial neighborhood. In future, according to the user specification, it may be developed for any spatial network application. This application can be deployed in the cloud server and cloud will provide a service to the user.

Keywords: Indexing Structures, IR-tree, Query Processing, R-tree, Spatial Databases

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9 References

1. N Mamoulis, M L Yiu, K H Cheng, D W Cheung
   Efficient top-k aggregation of ranked inputs
   ACM Transactions on Database Systems (TODS), volume 32, issue 3, p. 1 - 47
   Posted: 2007
   Crossref (https://doi.org/10.1145/1272743.1272749)

2. Z Li, Kck Lee, B Zheng, W-C Lee, D L Lee, X Wang
   IR tree: An efficient index for geographic document search
   IEEE Transactions on Knowledge and Data Engineering, volume 23, issue 4, p. 585 - 99
   Posted: 2011
   Crossref (https://doi.org/10.1109/tkde.2010.149)

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Mobile Prevention from Theft (MPT): A Review

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Abstract
This paper is a literature review on the topic of Mobile Security. The topic has been chosen due to the rise in mobile theft and the insufficient rise in the topic of the security.
Keywords—*Mobile Security, Mobile Theft, GPS, SMS, MMS*

Introduction

Smartphone usage became varied to person to person. Efficient and excellent features of smart phones attract the people. There are various types of smart phones like tablets, iphone, iPod which are handy and has advanced features that leads people to use more. There are chances of mobile theft since it is compact and portable. People store personal information, banking details, financial and business information in phones for easy usage.[1] We can find out the lost mobile without human help since we have the inbuilt app which helps in detecting the stolen mobile.

The app captures the image of the thief and identifies the location of the lost mobile using GPS. It alerts the owner of the mobile by sending SMS and MMS to his alternative mobile number and email id which is already stored in lost mobile. Through SMS the owner receives the IMSI number and through MMS he gets the short video clips. SMS works in offline and MMS works only in online. Mobile phones are increasingly precious not just to the growing classiness of their technology and it holds the mobile payment details[2] stored. Some estimates put the value of data held on typical smart phones at more than the value of the phone itself. This paper gives the review about mobile theft detection.

Related Works

GPS

Radiolocation tracking systems is an emerging system in the field of wire-less communication. In particular, the US Department of Defence initiated the satellite-based Global Positioning System in 1978. It promises to revolutionize location-tracking technology since there is a increase in commercial usage. Offered free of charge and accessible worldwide, GPS is becoming a universal utility by integrating the technology into vehicles, machinery, computers, and cellular phones decreases.

GPS determines the correct location on moving object or person. However long it takes a satellite signal to achieve a receiver, that generates its own signal. forward that the signals area unit synchronous, GPS compares the satellite signal's pseudorandom variety code—a digital signature distinctive to every satellite—with the receiver's PNC to see the signal's period of time. The system multiplies this price by the speed of sunshine to reason the satellite's distance from the receiver.[3]

Recently, mobile devices like mobile phones or transportable digital displays (PDAs) area unit equipped with world positioning system (GPS) receptors that enable USA to induce the device's geographic position in real time. Location based mostly Services (LBS) area unit thought to be a key

SIGN LANGUAGE RECOGNITION FOR DEAF AND DUMB PEOPLE USING ANDROID ENVIRONMENT

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ABSTRACT

This paper helps the deaf and dumb person to communicate with the rest of the world using sign language. Communication plays an important role for human beings. Speech-to-sign technology and VRS enables audible language translation on smart phones with signing and application has characters feature in mobile without dialling number uses a technology that translates spoken and written words into sign language with video. Interaction between normal people with blind person is very difficult because of communication problems. There are many applications available in the market to help the blind people to interact with the world. Voice-based email and chatting systems are available to communicate with each other by blinds. This helps to interact with persons by blind people. This work includes a voice based, text based and video based interaction approach. Video chat technology continues to improve and one day may be the preferred means of mobile communication among the deaf. Technologies not mashed up to solve the problem of mobile sign language translation in daily life activities. Video interpreter is responsible for helping deaf or hearing impaired individuals understand what is being said in a variety of situations. The main feature of this work is that it can be used to learn sign language and to provide sign language translation of video for people with hearing impairment.

Keywords: Speech Recognition, Sign Language, Speech Translation.

1. INTRODUCTION

Android application have shown a dramatic improvement in their functionality to a point where it is now possible to have cellular phone execute Java programs. As a result, cellular users throughout the world are now able to read and write email, browse web pages and play java games using their cellular phones. This trend has promoted as to propose the use of android application for better communication. Before SMS/MMS, deaf people rarely used mobile phones. Now texting allows deaf people remotely to communicate with both deaf and hearing parties. Mobile video chat may one day replace texting, but only for conversations between hearing callers, not for those between deaf and hearing callers. Outfit-7 is an application in which an image movement will repeat everything we say in a high-pitched voice. Without dialing number we can use this application.

This paper deals an alternative for gesture detection using image processing technique between deaf people which overcomes the above technique and paves the way for the communication between deaf and normal people in their daily activities using sign language and video relay service. Video technology continues to improve and one day may be the preferred means of mobile communication among the deaf. It allows deaf, hard-of-hearing and speech impaired individuals to communicate over video or other technology with hearing people in real-time, via a sign language interpreter. The idea behind SE (Signed English) and other signing system parallel to English is the deaf people will learn English better if they are exposed.

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A REVIEW ON DIAGNOSIS OF NUTRIENT DEFICIENCY SYMPTOMS IN PLANT LEAF IMAGE USING DIGITAL IMAGE PROCESSING

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Abstract

Plants, for their growth and survival, need 13 mineral nutrients. Toxicity or deficiency in any one or more of these nutrients affects the growth of plant and may even cause the destruction of the plant. Hence, a constant monitoring system for tracking the nutrient status in plants becomes essential for increase in production as well as quality of yield. A diagnostic system using digital image processing would diagnose the deficiency symptoms much earlier than human eyes could recognize. This will enable the farmers to adopt appropriate remedial action in time. This paper focuses on the review of work using image processing techniques for diagnosing nutrient deficiency in plants.

Keywords:

Color Segmentation, Color Space, Mathematical Morphology, Color Feature Extraction, Classifier

1. INTRODUCTION

Plants and crops require 13 essential mineral nutrients to grow and survive. They acquire these nutrients from the soil. Deficiency of these nutrients affects the growth and quality of the plant/crop. Thus, diagnosing nutrient status of minerals plays a crucial role in agriculture and farming.

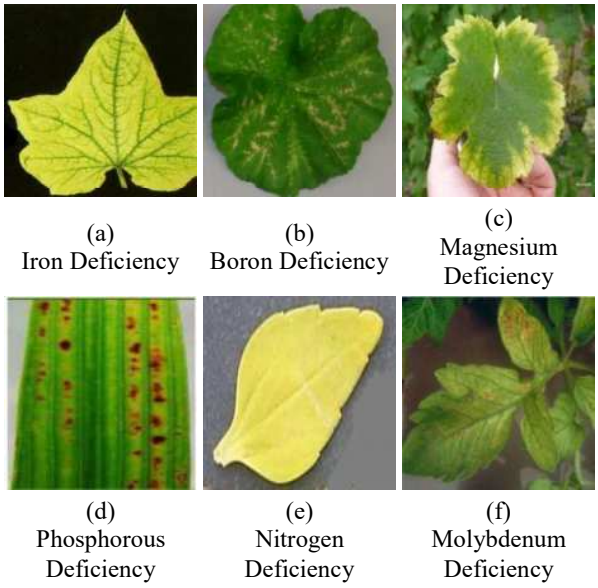
Nutrient deficiency symptoms in plants/crops would normally be visible in leaves. These symptoms include interveinal chlorosis, marginal chlorosis, uniform chlorosis, necrosis, distorted edges, reduction in size of the leaf etc. Even though similar symptom present in old and young leaves, the deficient nutrient may vary. The Fig.1 depicts some of the visual deficiency symptoms shown by plants on leaves.

The mineral nutrients classified into macro and micro nutrients. Plants need large quantity of macronutrients and small quantity of micro nutrients for survival. Macronutrients include Nitrogen, Potassium, Sulfur, Calcium, Magnesium and Phosphorous. Micronutrients include Boron, Copper, Iron, Chloride, Manganese, Molybdenum and Zinc.

1.1 COMPONENTS OF NUTRIENT DEFICIENCY DIAGNOSTIC SYSTEM

The diagnostic system would include the following components using image processing techniques:

- Leaf area measurement
- Segmentation of edge and veins of the leaf
- Determining the Shape of the leaf
- Classification of the deficient mineral
- Determining the age of leaf
- Extraction of color features of the leaf



(a) Iron Deficiency (b) Boron Deficiency (c) Magnesium Deficiency

(d) Phosphorous Deficiency (e) Nitrogen Deficiency (f) Molybdenum Deficiency

Fig.1. Visual symptoms shown on Plant/Crop Leaves for various mineral deficiencies

2. RELATED WORKS

Many methods of diagnosing nutrient deficiencies in plants or crops have been proposed in the field of image processing. In this paper, the various research works and algorithms developed in detecting the healthy regions, unhealthy regions and classifying them into the appropriate type of nutrient disease or deficiency symptoms are discussed. The performance measures of the algorithms are presented in Table.1 through 7.

2.1 LEAF AREA MEASUREMENT

Patil and Bodhe [1] have discussed an algorithm to measure area of Betel leaf. Initially, the leaf outline was drawn on a graph paper with 1mm grid size and the leaf area was calculated by counting number of grids. This value was taken as true value. Then, the original RGB leaf image with reference object was binarized to count number of pixels using image processing method. A reference object, a one rupee coin, with known area was used to convert pixel count of binarized leaf image into leaf area. This measured area was compared with measured true value and relative error was calculated. The algorithm gave an accurate result with least relative error.

Li et al. [11] have devised an algorithm to calculate leaf area of different species. RGB image of leaf on the rectangular shaped paper was captured and the count of number of pixels of leaf and rectangular paper were calculated. Leaf area was calculated using

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SHORT COMMUNICATION

Sustained mitogenic effect on K562 human chronic myelogenous leukemia cells by dietary lectin, jacalin

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Received: 18 April 2016 / Revised: 1 July 2016 / Accepted: 10 August 2016

Abstract Dietary lectins have been shown to affect the proliferation of human cancer cell lines. The anti-proliferative effects of lectins from varied sources have been extensively studied and in some cases, the underlying mechanism has been explored. Except for peanut agglutinin (PNA), the mitogenic effects of no other lectins have been studied in detail. In the present study, we have shown that jacalin, lectin purified from jackfruit (*Artocarpus integrifolia*) seeds act as a mitogen for K562, the Bcr-Abl expressing erythroleukemia cell line (K562) and the effect was found to be dose dependent. K562 cells remained in the proliferative state for a longer period even after the withdrawal of jacalin stimulation, thus jacalin was found to induce sustained mitogenic effect on K562 cells. Further, conditioned media from K562 cells treated with jacalin were observed to have the similar mitogenic effect even in the presence of galactose. Importantly, galactose which is a known ligand for jacalin will interact with functionally active jacalin present in the conditioned media and neutralise its effect. In addition, jacalin treatment also resulted in increased mRNA expression levels of pro-inflammatory cytokines including IL-1β, IL-6 and IFN-γ. Our results indicate that jacalin induces secretion of soluble molecules, which maybe responsible for this observed increased proliferation of K562 cells.

Keywords Lectins · Jacalin · Cell proliferation · K562 erythroleukemia cells · Thomsen-Friendenreich disaccharide · Pro inflammatory cytokines

Introduction

Dietary lectins such as those found in banana, potato, jack fruit, tomato, mushroom, peanut, kidney bean, corn, pea lentils, soybean and wheat represent a unique group of carbohydrate binding proteins that are characterized by their property to agglutinate erythrocytes from diverse species [1]. As plant lectins constitute an important part of our diet, it becomes important to understand the consequences of their binding to mammalian cell surfaces. Several plant lectins, belonging to diverse groups, based on their carbohydrate binding specificity have been shown to adversely affect the proliferation of different cancer cells [2]. Most plant lectins are tightly globular proteins that are resistant to heat, proteases and extreme pH thus enabling them to pass into the systemic circulation in their biologically active form [3]. Peanut lectin, for instance has been detected in blood of humans minutes after consumption and its active form has been recovered from faeces [4]. Also, the *N*-acetylglucosamine binding lectin, wheat germ agglutinin was detected in its biologically intact form in the ileostomy effluent and faecal collections [5]. Hence, it is of considerable importance to understand the direct consequences of lectins on cell growth and proliferation, after ingestion.

The Thomsen-Friendenreich disaccharide (TFD) binding lectins that include the PNA, amaranthine, *Maclura pomifera* agglutinin, jacalin, *Agaricus bisporos* lectin (ABL) as well as the heat labile E.coli enterotoxin constitute a remarkable group of lectins that share the property of binding the TF-antigen selectively with high affinity and have received

Electronic supplementary material The online version of this article (doi:10.1007/s10719-016-9725-8) contains supplementary material, which is available to authorized users.

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Special Issue

Analysis of Consumers' Perception, Attitude, Satisfaction and Post Purchase Behaviour towards Online Shopping in Chennai

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ABSTRACT

Online Shopping is a current phenomenon which has developed a great importance in the modern business environment. The evolution of online shopping has opened the door of opportunity to exploit and provide a competitive advantage over firms. Growing numbers of consumers shop online to purchase goods and services, gather product information or even browse for enjoyment. Buying products online gives customers the opportunity to find a great variety of products, customers can review a wide selection of products and find special offers with the best deals online. Online shopping environments are therefore playing an increasing role in the overall relationship between marketers and their consumers. The aim of the study is to analyse the customers' perception, attitude, satisfaction and post purchase behavior towards online shopping in Chennai. Based on a sample of 100 online customers of various products in Chennai District, descriptive and inferential analysis is carried out. Correlation and Multiple Regression Analysis are used to test the hypotheses. The study reveals that Perceived Easiness and Website Features have more impact on the positive post purchase behaviour of consumers towards online shopping. The study also finds that the Customers' Perception, Attitude and Satisfaction influence the Post Purchase Behaviour towards online shopping products.

Keywords: Perception, Attitude, Satisfaction, Post Purchase Behaviour, Online Shopping.

INTRODUCTION

Due to the significant and important changes in the last couple of decades in Information and Communication Technologies, the Internet and personal computers have significantly penetrated our daily lives. Coupled with changing consumer preferences and technological advances, individual shopping behaviors have also altered significantly. A new concept of technology-enabled shopping, called "Online Shopping," emerged after the first Internet web browser back in the 1990s. Since then, Online Shopping has attracted significant attention by both academics and practitioners alike. Online Shopping is a current phenomenon which has developed a great importance in the modern business environment. The evolution of online shopping has opened the door of opportunity to exploit and provide a competitive advantage over firms.Growing numbers of consumers shop online to purchase goods and services, gather product information or even browse for enjoyment. Buying products online gives customers the opportunity to find a great variety of products, customers can review a wide selection of products and find special offers with the best deals online. Online shopping environments are therefore playing an increasing role in the overall relationship between marketers and their consumers. The

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Mediating Role of Locus of Control on Factors Influencing Investment Decisions in Chennai

A. Barkathunisa

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Abstract: The stock market in any country becomes the yardstick for the measure of economic strength and development of the country. It is a place where the purchase and sale of shares take place. Since it is the source of financing investments of business organizations, the movements of the stock market or the trend as what it is called, can help determine the economic health of the country in which the rise of the share price is considered to be healthy and a fall in the prices vice versa. Pakistan, the emerging market, was ranked the best performing market in the whole of Asia in 2016 according to Bloomberg, and it is ranked as the fifth best market with regard to its market performance globally. Investors around the world today are looking for stock markets that are less effected by the interest rate cycles in the U.S. and the economic slowdown in China and Pakistan proves to be a great opportunity for such investors in future ventures. It is important to study the behaviour of investors operating in the Pakistan Stock Market to understand the factors that influence their investment behaviour. This study has been mitigated to identify the relationships between the representative bias and availability bias and the overall influence of representative as well as the availability bias on the investment decision making by the investors. The role of locus of control as mediator in this model has been explored. The structural equation modelling technique was adopted to test overall model fit and the mediating effect of locus of control. This study investigates the role of locus of control on relationships between representative bias and investment decisions, Availability bias and investment decisions. This study empirically approached the investors' decision making power in terms of their locus of control. The result does not support completely the locus of control plays a role in investors decision making but it also not completely eliminate the role of investors' decision making with respect to locus of control. It is concluded that the more focused studies on the internal behaviour of investors may fetch many attributes that would foster the investment venues.

Key Terms: Investors' decision making, Locus of control, Mediation

INTRODUCTION

The stock market in any country becomes the yardstick for the measure of economic strength and development of the country. It is a place where the purchase and sale of shares take place. Since it is the source of financing investments of business organizations, the movements of the stock market or the trend as what it is called, can help determine the economic health of the country in which the rise of the share price is considered to be healthy and a fall in the prices vice versa. Pakistan, the emerging market, was ranked the best performing market in the whole of Asia in 2016 according to Bloomberg, and it is ranked as the fifth best market with regard to its market performance globally. Investors around the world today are looking for stock markets that are less effected by the interest rate cycles in the U.S. and the economic slowdown in China and Pakistan proves to be a great opportunity for such investors in future ventures. It is important to study the behaviour of investors operating in the Pakistan Stock Market to understand the factors that influence their investment behaviour.

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DISEASES OF AQUATIC ORGANISMS
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High prevalence of *Enterocytozoon hepatopenaei* in shrimps *Penaeus monodon* and *Litopenaeus vannamei* sampled from slow growth ponds in India

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ABSTRACT: Hepatopancreatic microsporidiosis in cultivated *Litopenaeus vannamei* and *Penaeus monodon* is caused by the newly emerged pathogen *Enterocytozoon hepatopenaei* (EHP). It has been detected in shrimp cultured in China, Vietnam and Thailand and is suspected to have occurred in Malaysia and Indonesia and to be associated with severely retarded growth. Due to retarded shrimp growth being reported at farms in the major grow-out states of Tamilnadu, Andhra Pradesh and Odisha in India, shrimp were sampled from a total of 235 affected ponds between March 2014 and April 2015 to identify the presence of EHP. PCR and histology detected a high prevalence of EHP in both *P. monodon* and *L. vannamei*, and infection was confirmed by *in situ* hybridization using an EHP-specific DNA probe. Histology revealed basophilic inclusions in hepatopancreas tubule epithelial cells in which EHP was observed at various developmental stages ranging from plasmodia to mature spores. The sequence of a region of the small subunit rDNA gene amplified by PCR was found to be identical to EHP sequences deposited in GenBank. Bioassays confirmed that EHP infection could be transmitted orally to healthy shrimp. Histology also identified bacterial co-infections in EHP-infected shrimp sampled from slow-growth ponds with low-level mortality. The data confirm that hepatopancreatic microsporidiosis caused by EHP is prevalent in shrimp being cultivated in India. EHP infection control measures thus need to be implemented urgently to limit impacts of slowed shrimp growth.

KEY WORDS: Microsporidian · Slow growth · SSU rDNA · Plasmodia · *Vibrio* · Hepatopancreas · EHP

INTRODUCTION

Enterocytozoon hepatopenaei (EHP) has been reported in both *Penaeus monodon* (Chayaburakul et al. 2004, Tourtip et al. 2009) and *Litopenaeus vannamei* (Tangprasittipap et al. 2013) farmed in Thailand and also in farmed *P. monodon* exhibiting white faeces syndrome (WFS) in Vietnam (Ha et al. 2010). However, whether EHP is involved directly in causing a similar condition in *L. vannamei* has been questioned due to its presence in both affected and unaffected shrimp, and to the direct oral transmission of EHP to healthy shrimp not resulting in WFS (Tangprasittipap et al. 2013).

Microsporidians have been detected in *P. monodon* described as being affected by monodon slow growth syndrome (MSGS) (Chayaburakul et al. 2004). Based on *in situ* hybridization observations of hepatopancreas histopathology in *L. vannamei* infected with EHP at various severities, EHP has also been suggested to

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AN EMPIRICAL STUDY ON IMPACT OF WLB ON JOB SATISFACTION IN HIGHER EDUCATIONAL SECTORS

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ABSTRACT:

There are continuous changes in modern working place may leads to maximise stress level, competition in life, work-life balance to be emphasised in recent days. Employees are finding various ways which will help them balance between professional life and personal life effectively. Many researchers have also revealed that work-life balance leads to positive outcomes of organisation. This study was conducted examining the effects of work life balance of perceived co-worker and supervisor on employee job satisfaction. The result identified that work life balance of perceived co-worker and supervisor support would be positively related to, job satisfaction. One hundred and two participants completed a survey in the University of SRM. Results showed that employee perceptions of work-life support (both supervisor and co-worker support) are related to job satisfaction. It was also found that supervisor support analysed certain employee outcomes more so than co-worker support.

Key words: Work life balance, Perceived, Job satisfaction

INTRODUCTION

Work-life balance has important implications for both employees and their organizations. This area of research is becoming more popular as the workforce continues to change (Kossek, 2005). According to Kossek (2005), there has been a steady increase in dual-earner couples, single parent families, and employees who have eldercare responsibilities. These increased pressures can have negative impacts on employees and organizational outcomes such as overall work-life balance (Anderson, Coffey, & Byerly, 2002). Furthermore, Bragger, Rodriguez Srednicki, Kutcher, Indovino, and Rosner (2005) found that these increased pressures have a negative impact on job satisfaction.

The purpose of this study is to determine if perceived work-life support is positively related to affective and behavioural outcomes at work (i.e., work-life balance, job satisfaction). Furthermore, this study aims to determine which avenue of support, co-workers or supervisors, have a larger influence on affective and behavioural outcomes at work. Together, co-worker and supervisor support are considered to be informal organizational supports.

Literature Review:

The outcome of interest in this study is job satisfaction. Both co-workers and supervisors have the ability to influence employees' satisfaction with their jobs. Previous research has continually shown a positive relationship between co-worker support and

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A Hybrid Neuro-Genetic System for Iris Recognition

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Abstract: In this research, we have presented a technique for individual recognizable proof in view of iris recognition utilizing genetic algorithm and neural network. The procedure of iris recognition comprises of confinement of the iris locale and area of information set of iris pictures took after by iris design recognition. A neural network is utilized to diminish the low recognition rate, low accuracy and expanded time of recuperation. Here, the genetic algorithm is utilized to upgrade the neural networks parameters. The reenactment comes about demonstrate a decent recognizable proof rate and lessened preparing time. The iris became a much-explored field. Human iris contains unique and very important information about persons.

Key words: Recognition, confinement, diminish, recuperation, reenactment, demonstrate

INTRODUCTION

The iris turned into a quite investigated field. Human iris contains unique and very important information absent persons (Raja and Rajagopalan, 2013). Iris related works have been done in the medians domain determination of some possible health condition (Daugman, 2004) in biometrics domain (identification and recognition of a person) (Demea, 2005). Biometrics plays an important role in public safety and to accurately identify each individual to distinguish them from each other (Melin and Castillo, 2007). Biometrics assumes a vital part out in the open security and to precisely recognize every person to recognize them from each other (Tian *et al*., 2006). The customary techniques typically make utilization of attractive cards or cards with it standardized identifications imprinted on it (Ganesan *et al*., 2011). There are many odds of the cards might be sloten or cost recently there are many occasions of replication of fingerprints and attractive cards and their abuse have come into light. The division of digital wrong during has an extreme time in splitting the cases and following the guilty parties. The human iris is special and can't be copied or imitated since, it is picture without the information of a man. Iris district is the part between the student and the part between the student and the white sclera. The field is some of the time called iris surface. The iris surface gives numerous moment attributes for example, spots, crowns, stripes, wrinkles, graves (Anupam and Vinay, 2015). From the introduction of a man until death, the examples of the iris are moderately steady over a man's lifetime (Mukherjee and Chanda, 2011). Due to this uniqueness and strength, iris recognition is a dependable human recognizable proof of system. The procedure of iris recognition comprises of iris picture catching, pre-preparing what's more, recognition of iris area in eye picture. The irispicture preprocessing incorporates confinement. Practically speaking, the recognizable proof process begins when a picture of the eye from a individual situated before the advanced camera is taken. In the procedure of picture procurement Tx = f (£x) an advanced representation of the biometrics Tx is gotten from a genuine biometric £x. The following stride is fragmenting the iris picture which distinguishesthe region of intrigue: the iris surface. This procedure may incorporate particular elements and the encoding stage is a procedure that permits the biometric's computerized format Tx to be acquired. The coming about format is contrasted with those in a database in mode called 1:N to look for the example that best matches thelayout utilizing a choice limit t which is picked based on the expected security procedure. In the easiest case, a least separation classifier can be utilized for information mining in the database D which produces the most minimal likeness score s1.. N = s (Tx,T_1, ..., N) as indicated by the basic:

$$S \leq t \Rightarrow \text{match}$$
$$S > t \Rightarrow \text{not match} \quad (1)$$

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Combining Artificial Neural Network with Image Data Partitioning for Personal Iris Recognition System

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Abstract
With fast development of iris image acquisition technology, iris recognition is expected to become a fundamental component of modern society, with wide application areas in national ID card (AADHAR), banking, e-commerce, welfare distribution, biometric passport, and forensics, etc. In this paper, we propose a method for personal identification based on iris recognition system with the combination of image data partitioning and Feed forward Neural Network. This paper presents an efficient iris image pre-processing method and the design and training of Feed forward Neural Network. The image data partitioning methods are used to extract important features from the iris image and Artificial Neural Network is built as a recognition system. The process of iris recognition consists of localization of the iris region and generation of data set of iris images followed by iris pattern recognition. Brain Maker simulations were used to measure the accuracy of the system. We also experimented with various number of hidden layers, number of neurons in each hidden layer, input format (binary vs. analog), percent of data used for training vs testing. The recognition and Performance of the system is validated using CASIA version 3 interval dataset. The recognition system achieved high accuracy using simple data pre-processing and a simple neural network.

Keywords Neural Network, Iris recognition, image data partitioning

Introduction

Since 1990s, research on iris image processing and analysis has achieved great progress. Human identification plays a major role in personal security system. Iris recognition is considered as a robust human recognition system worldwide.

Related works have been done in the medicine's domain (determination of some possible health conditions [1]), in biometrics domain (identification and recognition of a person [2]) and others. Biometrics plays an important role in public safety and to accurately identify each individual to distinguish them from each other [3]. The traditional methods normally make use of magnetic cards or cards with some bar codes printed on it. The major problem in these types of methods is that the cards should be carried along where ever a person goes. There are many chances of the cards may be stolen or misplaced. Of late there are many instances of replication of finger prints and magnetic cards and their misuse have come into light. The department of cyber crime has a tough time in cracking the cases and tracking the culprits.

The human iris is unique and cannot be duplicated or imitated, since it is impossible to extract an iris image without the knowledge of a person [4]. Iris region is the part between the pupil and the white sclera. This field is sometimes called iris texture. The iris texture provides many minute characteristics such as freckles, coronas, stripes, furrows, crypts, etc [2]. From the birth of a person until death, the patterns of the iris are relatively constant over a person's lifetime [1, 3]. Because of this uniqueness and stability, iris recognition is a reliable human identification technique. The process of iris recognition consists of iris image capturing, pre-processing, and recognition of iris region in eye image. The iris image preprocessing includes localization. In practice, the identification process starts when an image of the eye from a person located in front of the digital camera is taken. In the process of image acquisition $Tx = f(£x)$, a digital representation of the biometrics Tx is obtained from a real biometric $£x$.

The next step is segmenting the iris image, which identifies the area of interest: the iris texture. This process may include

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ORIGINAL RESEARCH

Denudation of human amniotic membrane by a novel process and its characterisations for biomedical applications

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Abstract This study was aimed to investigate the suitability of a modified method to get decellularised human amniotic membrane (DHAM). The obtained membrane was subjected to physico-chemical and biological evaluations to validate its potential for biomedical applications. The human amniotic membrane was processed with detergent and alkali followed by enzymatic treatments. Hematoxylin and eosin (H&E) and Masson's trichrome staining of membrane were in accordance with conjectures: the decellularised membrane stained for extracellular matrix is rich in collagen. Scanning electron micrograph also showed the denudation in the processed membrane with the cellular impressions on the basement membrane. Physical characteristics namely the differential scanning calorimetric, tensile, shrinkage behaviour and the Fourier transform infrared spectra of decellularised membrane showed its stability and intact structure similar to the unprocessed membrane. In the visible range of light, the membrane was found to be transparent from 90 to 98 %. Proliferation rate of fibroblasts, keratinocytes, myoblasts and hepatocytes were significantly upregulated compared to the control. The cell morphologies were normal and differentiation of myoblasts into myotubes were more pronounced in decellularised membrane. Proliferation of corneal limbal cells on decellularised membrane showed 92–100 % confluency on day 21 and the migrated cells displayed a spindle shape and changing later to a more cuboidal appearance.

Keywords FT-IR · DSC · SEM · Histology · Proliferation · Limbal cells

Introduction

The innermost layer of placenta is the amniotic membrane (AM), the thickness of which ranges from 0.02 to 0.05 mm. It consists of an epithelial layer, basement membrane and avascular stroma. Human AM (HAM) has been used as a biomaterial in the field of dermatology in plastic surgery, skin transplantations and as a biological dressing for skin burns, wounds, chronic leg ulcers, ophthalmic healing, etc. (Gholipourmalekabadi et al. 2015; Davis 1910; Azuara-Blanco et al. 1999; Dua et al. 2004). Other studies have demonstrated the benefits of HAM as a substrate for ex vivo expansion of diverse cell lines such as limbal epithelial, corneal and conjunctival epithelial cells (Grueterich et al. 2002; Pellegrini et al. 1997).

The preservation strategies play a major role in retaining the biomaterial properties of HAM. Cryopreservation and lyophilization are the common techniques of preservation, but are not feasible every time due to their limitations. Moreover, following these techniques HAM will be preserved with epithelium which can be more immunogenic. The same feature can also limit its application for cell culture and tissue regeneration application because migration and differentiation of cultivated cells on HAM can be impeded (Shortt et al. 2009). To overcome this limitation, HAM can be denudated and the same can be processed either chemically (Davis 1910), or enzymatically

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ORIGINAL PAPER

ECONOMIC SUSTAINABILITY OF PRECISION FARMING IN TAMIL NADU

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ABSTRACT

Precision farming method of crop cultivation is very familiar in the region of krishnagiri district and it is practiced from 2004-05 onwards by the small, medium and large farmers in the region. Lot of attempts were made to study the productivity, income, resource use efficiency and how the technology travel from the university domain to farmer domain and subsidy. However, there is not much study focused on the economic sustainability of precision farming in the study area of krishnagiri district. Economic sustainability is the term used to identify various strategies that make it possible to use available resources to their best advantage. The idea is to promote the use of those resources in a way that is both efficient and responsible, and likely to provide long-term benefits. So, the present paper bridge to the research gap and highlight the precision farming and economic sustainability in the study area.

KEYWORDS: Precision Farming, Subsidy, and Economic Sustainability

INTRODUCTION

Tamil Nadu Precision Farming Project was a Tamil Nadu State sponsored turnkey project was implemented at Dharmapuri and Krishnagiri districts in 400 ha with a total budget of 7.20 lakhs for a period of three years (2004-05 to 2006-07) planted with 23 kinds of crops over the years and recorded 60 percent increase in yield and 90 percent marketable quality. It is a State Mega Demo which had trained the farmers and empowered technically, economically and socially. It adopts a location specific, field specific and crop specific approach to achieve the objective of optimization of inputs use to facilitate optimal output resulting in saving of valuable resources like water and energy. The project had adequately prepared the farmers for market driven production at a time when MNCs like Wall Mart, Carry Four, Tesco, Wools Worth, Reliance etc., were all set for invasion into retail vegetable market in India. The buyers and sellers meets have now became every day affair in as much as the cluster level associations and District level federations of the farmers assumed bargaining powers both for sale of the produce and for purchase of inputs as well. The site has now become the training ground for the farmers of rest of the state[1].

PRECISION FARMING

Precision farming is an innovative, integrated and internationally standardized approach aiming to increase the efficiency of resource use and to reduce the uncertainty farm management practice (Jurgen Schellberg et al 2008)[2]. In other word, the right input at the right amount at the right place in

[1] http://agritech.tnau.ac.in/pres_farm_agri.html
[2]JurgenSchellberg et al, Precision agriculture on grass land: Applications, perspective and constraints, European Journal of Agronomy, Elsevier, Vol. 29, 2008, pp. 59-71.

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A STUDY ON PRECISION FARMING TECHNOLOGIES AND ADOPTION IN TAMIL NADU

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ABSTRACT

Precision farming has been the catch phrase of agricultural research around the globe in recent times. It is based on the philosophy of heterogeneity within homogeneity and requires precise information on the degree of variability for within field management. The aim is to vary the agricultural inputs in response to the varying conditions within the field in order to achieve the desired productivity (Josiah et al, 1999). It is expected to result in saving of valuable resources like water and energy cost cutting and qualitative enhancement in the final produce. Minimal application of fertilizers and pesticides is expected to result in avoidance of soil degradation. Direct marketing and price negotiations are enabled through group formation among farmers and branding of the produce. But this concept understanding was a major problem for our Indian scenario while that the reason our farmers are lack of technical education and economically backwardness and more than that small and marginal farmers are very high in India it is more than 80 percent. This is the problem one side Hi-tech farm method is available but another side lack of utilization in the farming method. So, the present paper bridge to the research gap and highlight the precision agriculture components and its uses and also implementation and evaluation in Tamil Nadu precision farming project.

INTRODUCTION

Agriculture is the backbone and our country's economy as 14 per cent of GDP and 50 percent employment is generated from agriculture. The world population is growing and forecast to reach around 9 billion by 2050 and more than 10 billion by 2100 according to a United Nations press release of may 2011. The population of India continuing to increase farmers must try to produce more from less and while at the same time protecting environment and ensuring food security in order to manage land in such a way to sustain it and the wider environment in a healthy condition for the future generation (Oliver, 2013)[1]. Further, increasing agricultural productivity perhaps remains the single most important determinant of economic growth and poverty reduction, and hence provides the key to millennium development goal. Hence, improvements in productivity come from adoption of new technologies and increase in production efficiency. Much of the progress in increasing yield to meet to growing population and also higher standard of living in many part of the world in the middle part of the twentieth century stemmed from improvement in crop varieties to give

A Study of Source of Information and Cost of Cultivation under Precision Farming in Krishnagiri District of Tamil Nadu

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Abstract

Precision farming uses a system approach to provide a new solution to contemporary agriculture. In Tamil Nadu, precision farming was implemented under the Tamil Nadu Precision Farming Project (TNPFP) in Dharmapuri and Krishnagiri districts on about 400 ha from 2004-05 onwards. Most parts of the Krishnagiri district are semi-arid tracts with low rainfall and low productivity. In this context, there is a need for studying the impact of technological innovations like precision farming on resource-poor regions and underprivileged farm households. Specifically, the study has looked into the productivity, income and employment at farm level. Hence, Krishnagiri district was selected as the study area. As per the report of the government of Tamil Nadu, the number of precision farmers was high in Krishnagiri district. The study covered 168 precision farmers and 84 non precision farmers as the sample respondents to collect data. Thus the total size of the sample came to 252. The study found that the share of cost in the case of precision farmers was highest for human labour 27.17 per cent because to increase yield more labour required especially at the time of harvesting or cutting of the vegetables and flowers. Found that farmers used four types of fertilizer they are, straight fertilizer (urea, potash), farm yard manure (FYM - cow dung, poultry manure and vermin compost), bio-fertilizer (trichoderma) and water soluble fertilizer (19-19-19, Multi K) in the study area. Furhter observed that the FYM and bio- fertilizers involve high cost due to scarcity of cattle and awareness about the importance of FYM on soil quality.

***Key Words**: Precision Farming, Cost, Production, Fertilizers and Employment.*

Agricultural Farm Managing Technology

Jagan Gopu.

Precision farming has been the buzzword of agricultural research around the globe in recent times. It is based on the philosophy of heterogeneity within homogeneity and requires precise information on the degree of variability for within field management. The aim is to vary the agricultural inputs in response to the varying conditions within the field in order to achieve the desired productivity.

Concept of Precision Farming

The conventional agronomic practices being adopted now follow a standard management option for a large area irrespective of the variability occurring within and among the cultivable land. For decades together, the farmers have been applying fertilizers based on recommendations emanating from research and field trials under specific agro-climatic conditions. Since soil-nutrient, characteristics vary not only from one region to another, but also from field to field, this may be one of the reasons for the present production level. Even within a field, there is a need to take into account such variability while applying fertilizers to a particular crop. Precision farming or precision agriculture or precision crop management has to consider intra-field variations in soil fertility and crop conditions and matching the agricultural inputs like seed, fertilizer, irrigation and use of plant protection chemicals & Methods has to optimize the input or maximize the crop yield from a given quantum of input2.

Precision agriculture is based on information technology, which enables the producer to collect information and data for better decision making. Precision agriculture is a pro-active approach that reduces some of the risks and variables common to agriculture. The concept of precision agriculture offers the promise of increasing productivity while decreasing production cost and minimizing environmental impacts. Precision agriculture conjures up images of farmers overcoming the elements with computerized machinery that is precisely controlled via satellites and local sensors and using appropriate software that accurately predicts crop development. This concept is considered by some as the future of agriculture.

Precision Farming Technologies

Precision farming (PF) is a management philosophy or approach to the farm. It identifies the critical factors where yield is limited by controllable factors, and determines intrinsic spatial variability. It is essentially more precise farm management made possible by modern technology. The variations occurring in crop or soil properties within a field are recorded, mapped and then management actions are planned and initiated as a consequence of continued assessment of the spatial variability within that field5.

Geographical Information Systems (GIS) and Global Positioning Systems (GPS)

GIS refers to computer software that provides for data storage, retrieval, and transformation of spatial (field) data. GIS software for precision farming management will store data, such as soil type, nutrient levels, etc, in layers and assign that information to the particular field location. A fully functional GIS can be used to analyze characteristics between layers to develop application maps or other management options. The field location is usually stored by the latitude and longitude of that position, which is typically found using a Global Positioning System (GPS). Remote sensing techniques play an important role in precision farming by providing continuously, acquired data of agricultural crops. The analysis of the variability occurring within the field is carried out by measuring soil and plant parameters through conventional methods as well as through spectral techniques using ground truth spectro-radiometer (350-1800 nm) and satellite data Sensors

These are being used to determine crop stress, soil properties, pest incidence, etc. as the tractor or any other mobile device passes over the field, as a scout goes over the field on foot. Measurement of plant and soil properties as the tractor or combine travels over the field is a developing area in precision farming. Currently, yield monitors are the primary sensing system that makes measurements. The observed values (through sensor) are compared with real time values and make recommendations on the appropriate application rates of nitrogen, other nutrients, irrigation and pesticides efforts are about to achieve Perfection of sensors to be precise in relation to other parameters namely, weeds, nitrogen levels in plants, and total soil properties.

There lies a long way to go and to have it to suit to resource poor farmers of the developing world will take much more time and is a difficult task to promote PC under such situations. There are also sensors that can be carried by a scout to the field and used to spot check the health of plants and soil properties. They use light reflectance on the leaf to determine chlorophyll levels. It has been shown that nitrogen levels in the plant are directly proportional to the chlorophyll production. Several soil chemistry kits are also available to measure soil pH, nitrogen, potassium and phosphorus in the field without waiting for soil sample result. Remote sensors are generally categorized as aerial or satellite sensors that can provide instant maps of field characteristics. An aerial photograph is an optical sensor that can display variations in field color that correspond to changes in soil type, crop development, field boundaries, roads, status of soil water, water bodies etc.

Tamilnadu Precision Farming Project

Hence, In Tamil Nadu, precision farming was implemented under the Tamil Nadu Precision Farming Project (TNPFP) in the Dharmapuri and Krishnagiri districts on about 400 ha of land with a total budget of 720 lakhs for a period of three years. ❖

"An Over View of the Implementation of Precision Farming Projects in Tamil Nadu, India"

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Abstract

The major problem for the failure of agricultural sector in India is believed to not taking the modern methods and innovations from the knowledge quarters to the agricultural field. Without the meeting of technology and ground level implementation, the benefits of modern technology and science cannot be optimal. Unsuitability of technology given the local agro-climatic conditions, unawareness of technology due to a communication gap, unwillingness to take unknown risks due to lack of trust, lack of knowledge, cultural barriers, lack of adequate credit of support for investment which is a prerequisite to the adoption of technology, to overcome these barriers, sound management of the technology dissemination need to be followed. The demonstration conducted by the Official of the project at Krishnagiri block, in Pennaiyar river sub basin, Alapatti tank in Krishnagiri district reveals that the initial demonstration implemented in the period of October 2008 to March 2009 with the 39 farmers and covered 26 hectare. The sustainability is very important aspect to measure the success or failure of the precision farming in the implemented area hence 134 farmers with 40 ha coverage showed that the real demonstration effects on farmers were adopted and sustained with precision farming through the year with various multi crops cultivated by the farmers because of higher yield, least inputs and more than that huge income from the farm. Followed by the last year Oct 2011 to Mar 2012 the total area of demonstration covered 110 ha and the impact also 110 ha with the overall demonstration which spread across the area with the total sustainability area is 448 ha.

Key Words

Precision Farming, Modern Technology, Adoption of Technology, Sustainability.

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Title: Sustainability practices and lifestyle groups in a rapidly emerging economy: a case study of Chennai, India

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Abstract: The development of strategies to encourage more sustainable approaches to resource consumption is a key global challenge. This is particularly the case within rapidly developing countries such as India, due to rapid urbanisation, population growth and resource consumption. Using households in the Southeastern Indian city of Chennai as the case study, this study sought to examine the extent to which lifestyles could be categorised into groups and the role of the concepts of sustainability on these groups. Five lifestyle groups were identified, ranging from 'dedicated environmentalists', to non-environmentalist'. Conservation of electricity and water were key sustainability behaviours. Various key factors were found to impact upon the behaviours of individuals in these groups including perceived limitations in time, levels of awareness, as well as values. The implications of the findings for facilitating improved policies and practices are discussed.

Keywords: Chennai; India; energy conservation; water conservation; recycling; sustainable development; pro-environmental behaviour; sustainability; lifestyle groups; emerging economies; case study; time limitations; awareness levels; values.

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A WebGIS BASED STUDY FOR MANAGING MANGROVES OF KRISHNA DELTA, ANDHRA PRADESH, INDIA

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ABSTRACT: Mangroves are one among the most productive ecosystem which provide a wide range of services to the coastal people, which includes the provision of food and timber products and coastal defense services by reducing risk from coastal hazards. Several research found that mangrove forests have been degraded throughout the world since 80s onwards due to anthropogenic factors and India is no exception for the same. The current study was conducted in the Krishna's wetland, which is located in Krishna district of Andhra Pradesh (AP), South India, India. The Mangroves of Krishna is second largest mangrove ecosystem in AP, fifth in East coast, eighth in India and it is rich in biodiversity but highly vulnerable because of anthropogenic and natural factors which makes this study area very scared. Information on Krishna mangroves and their geospatial information are owned by different institutions to build this geospatial dataset as open to access everyone. The WebGIS is a latest advancement and hybrid of GIS and Internet technologies for the dissemination of the geospatial datasets and its variations through the web. The main objective of the current study is to develop and demonstrate a WebGIS using open source software and integrate geospatial datasets of the mangroves of Krishna into WebGIS platform and to analyse and assess areas that are degraded by influenced parameters and in need of sustainable management.The result revealed that the area of mangroves in Krishna was decreased from 2,454 ha in 1990 to 1,363 ha in 2000 to 1,339 ha in 2011. On the other hand the areas of mangroves in the Krishna delta were increased to about 678 ha from 1990 to 2000 and 2,230 ha from 2000 to 2011. It may be pointed out that the variation in mangrove covers in the study area due to landuse conversion for different purposes and mangroves provides coastal defense services by reduce risk of coastal hazards. It is may be concluded that this WebGIS study is very useful and unique because it is sharing data through internet to everyone as it save money, time and data duplication, which are needed to different stakeholders such as researchers, decision makers, planners for the sustainable management of mangrove ecosystem.

Keywords: Mangrove Ecosystems, WebGIS, Spatial datasets, anthropogenic

1. INTRODUCTION

Mangroves are salt tolerant trees or shrubs, which occur in mudflats of intertidal zones of tropical and subtropical regions. They are the one among the most productive ecosystem and provide lot of benefits to the local community (Tomlinson 1986). Globally, 117 mangrove species were identified of which true mangrove species are seen in the core zone and they are about 54 species belonging to 20 general of 16 families and the rest of them were associate species as they were found in the transition zone between mangrove ecosystem and terrestrial ecosystems. Degradation of mangrove forests has become a serious problem throughout the world, mainly because of both anthropogenic and natural processes have induced major change in mangrove environment, increasing mangrove degradation in many places. Indian mangroves are also no exception for this degradation (Upadhyay et al., 2002; Selvam et al,2003). According to State of Forests Report (2011) Indian mangroves status reports has been preparing since the mid 80s onwards that has compared with assessments of the 90s, 20th and 21st centuries' which showed irregular variations. This variation is mainly

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DIMENSIONS AND INDUCERS OF STRESS AMONG WORKING WOMEN

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Abstract

In today's modern economy stress is the major cause and killer of employee productivity and psychological happiness. Our study explores the underlying dominant dimensions of personal causes of stress (PCS), organisational causes of stress (OCS) and fulfillment of remedial measures to reduce stress (FRMRS) among working women is identified as, Human Resource Development, Job Nature, Motivation, Engagement, Work Life Imbalance, Job Enrichment and Employee Commitment factors. There is significance difference between Importance of Remedial Measures to reduce stress and Fulfillment of Remedial Measures to reduce stress (IRMRS) among working women in Chennai city. Experience in current organisation significantly influences OCS and total working hours per day and nature of family significantly influence PCS whereas age and nature of organisation significantly influence both OCS and PCS among working women. Educational qualification, nature of organisation and level of employment are significantly influencing the FRMRS among working women. In order to eradicate these stressors the management needs to Involves the Human Resource Practitioners for effective strategic planning and counseling, imparting work life enrichment skills, providing career development opportunities and taking timely action to redress grievances will enrich job nature and ensuring job security, providing fair and good salary, following adoptable organisational culture or climate and healthy, safety working environment will encourage the employee for better engagement in their job to reduce the stress among Working Women.

Key Words: Stress, Personal Causes, Organisational Causes, Fulfillment and Importance, Development, Engagement and Enrichment.

I. Introduction

In today's modern economy stress is the major cause and killer of employee productivity and psychological happiness. The concept of stress is stated by selye (1956) is basically physiological one, in which the stress response is seen as a necessary adjunct to the organism's fight for survival. The exposure of prolonged stressors causes the employee health and well-being and productivity of the firm. Stress manifests itself in both positive and negative ways. The positive stress of the employee gets an opportunity to gain new knowledge and equipping them self will lead towards career growth of individual as well as organisation. In today's scenario workplace and family simultaneously undergoing rapid changes in modernized and urbanized environment. But, it was conceived pressure from the environment and inherent strain of the employee. In this study at attempt has been to study and identify the underlying dimensions of stress and inducers of stress among working women. Because, the working women are battling with the concepts of super mom, best wife and fulltime employee in an perfectively competitive environment. Stressors can be generally divided into two categories such as Organisational Causes of stress and Personal Causes of stress.

II. Review of Literature

Rajendran Jayashree (2008) conducted an explorative and analytical study to analyse the job stress among the public sector bank employees and also examined the effect of stress on work factors such as, job satisfaction, task effect, and organisational commitment. Results reveal that majority of the bank employees are stressed due to excessive work load, lack of acceptability, lack of time management, lack of support from peers, feeling of inequality, difficulties in nature of job, lack of role clarity, impatient customer attitude and technological problems in premises and the researcher concluded that work life imbalance is the major cause influencing the stress among bank employees. So, organisation needs to support their employees to balance the work life and personal life together for the success of the organisation. (Tharini Ramanathan & *et.al* 2014; Aziz 2013) made an attempt to study the stress level among working women in software industry and they explored that there is a talent leakage in middle aged working women. Family and other personal reasons are obstructers for women to reach higher hierarchal positions in workplace and they suggested nurturing their talent at work place, through the effective training and development is an effective measure to enhance the skill and match employee expectations to mitigate the stress level among respondents.

(Mohan and Ashok, 2011; Balasubramanian Vimala and Chokalingam Madhavi 2009); explored the relationship between the stress and depression and also identified the influence of demographic profiles on stress and depression. These studies result depicts that age and experience have significant influence on stress and depression among IT professionals and lack of employee engagement due to frequent organisational change is the major cause for stress among IT professionals. The

A RELATIONSHIP BETWEEN CHANGE MANAGEMENT AND PERFORMANCE OF COLLEGE TEACHERS-A STUDY WITH REFERENCE TO ARTS AND SCIENCE COLLEGES IN CHENNAI.

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INTRODUCTION

Change management is "an approach to transitioning individuals, teams, organizations and institutions to a desired future state"(Wikipedia). Institutions today are changing their activities and the institutional culture, due to the promotion of applied science, teaching techniques and conduct of the teaching staff. Higher Educational institutions are reshaping to respond to their environment. The world of work in the education field is changing at an ever increasing pace. Therefore, management actively seeks out teachers who can adapt the varying weather, surroundings and embrace new ideas. Both people and institutions must grasp the heart of change and adapt to the process for survival in this quickly shifting surroundings.(Pvl Raju,2005).

CHANGE MANAGEMENT IN COLLEGES

Change Management in colleges and universities are inevitable due to rapid increase in competition from colleges and universities inside and beyond countries and from private providers.If the higher educational institutions successfully tackle the change management, they become smarter at both the "what" of change (Identifying change ideas that will truly create a difference for pupils) and the "how" of change (making sure these ideas function in practice). Efficient change management engages the faculty in updating their knowledge and make the students in productive learning which contributes to efficient performance of educational activity and scholarship. Higher education is presently fronting a potent combination of presses for change. At that place must be a framework for managing change in a fair and consistent manner during organizational restructures. This facilitates minimizing disruption to the operations and eases fears among those affected by the alterations.

Institutional change can be evolutionary (or) revolutionary depending on the events that are motivating the need for modification. They must anticipate change by continuously diagnosing problems and looking for opportunities that may require change. Modifications may be required in individual behavior, organizational operations, strategic directions (or) organizational design. To accomplish high performance in anincreasingly dynamic and uncertain global environment, educational institutions must make a comprehensive internal capability to harness change for competitive advantage.

PERFORMANCE OF COLLEGE TEACHERS:

Performance is the attainment of a given task measured against preset known standards of accuracy,completeness,cost and speed.College teaching is a profession built on summit of another profession – a meta- profession. People come to the profession with specific professional knowledge and accomplishments, including content expertise and research techniques. The professors are named to perform at professional levels in four possible roles, teaching, scholarly, research activities, service to the institution and the community and administration. Brewer (1997) Stated that most effective educators have been perceived as caring, enthusiastic, consistent and impartial when dealing with pupils.