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Phytochemical and antimicrobial study of *Peristrophe bicalyculata* nees of family acanthaceae

Sudhir Singh Chandel, M Salim and IP Kumhar

Abstract
Peristrophe bicalyculata is a straight, hispid herb 70 to 180 cm tall, found in forests and waste lands almost across the country. The species is herbaceous plant, with two-lipped flowers. *Peristrophe bicalyculata* (Acanthaceae) is up to 60-180 cm in height and established almost throughout Sidhi district (M.P.). *Peristrophe bicalyculata* is commonly known as kakajhanga in Sanskrit and kali aghedi in Hindi. The herb is used for its anti-bacterial properties like snake poison, in bone fracture, cold, cough, fever, sprain and for ear and eye treatments. The chemical constitutes of the dried aerial parts be seen 14-methyl-tritriacont-14-en-15-ol and 35-hydroxynonatriacontanal. Extract of this plant posses' various pharmacological parameters such as antimicrobial, antioxidant, anti-diabetic, anti-inflammatory, enzyme inhibitory activities without any side effects. The diverse parts of this plant has been widely used in treating various skin infections. Pioneer work was done by our Shushrut, Saints Charak and several others, which was collected in the form of vedas (Rigveda, Ayurveda) Samhita, Nighantu and Aryabhishak. *Peristrophe bicalyculatta* (Retz-Nees) is reported to be the useful remedy for the treatment of T.B, Antiseptic, Jaundice, Menorrhagia, and Anti-venom agent in indigenous system of medicine. In this review we have studied the detailed phytochemical of stem and leaf as well as physiochemical parameters, phytochemical screening and leaf or seed constant. The solvent extract is used in checking antimicrobial activity against all the clinically isolated microorganisms.

Keywords: *Peristrophe bicalyculata*, bioactive compounds, solvent extract, anti-microbial activity, skin treatment

Introduction
Major population in developing world is now raising awareness in raising living standard and decreasing poverty and improving healthcare. Nowadays, almost 80% of the population is indirectly dependent on medicinal plants for their health. Green leafy vegetables are a major source for nutrition because they possess rich quantities of fibers, vitamins and minerals. Some of these leafy vegetables are widely used in preparing soups in various countries such as West Africa and Nigeria. They are been used as medicinal plants since ages and possess various antimicrobial properties. Some of the plants are also used for flavoring and spicing. The wide variety of nutrients and medical properties of plant has created awareness amongst people in increasing knowledge in antimicrobial, phytochemical, antioxidant, anti-inflammatory properties of food (Chinmma and Igyor, 2007) [1]. The plants which contains green leafy vegetables possess rich sources of ascorbic acid, folic acids, carotene, riboflavin and minerals like iron, calcium and phosphorus (Fasuyi, 2006) [2].
The researchers has made a great contribution in discovering various new antibacterial compounds. Acanthaceae is mostly used in traditional medicine. *Peristrophe bicalyculata* is used to treat various diseases like typhoid fever, cholera, tuberculosis. The ethanolic extract of this plant is more effective against *E. coli* and *S. typhi*. By distillation, yellow-brown colour essential oil can be extracted. The plant *P. bicalyculata* is used as antidote for snake poison, cough, cold, asthma, bone fracture, etc. The leaves of this plant are used for many skin problems like wound healing, bee-forage.
The plants that shows phytochemical properties may determine antimicrobial properties too. These are the basis of plant´s odour, colour, flavour, and are disease resistant. Liu (2004) [3] stated that phytochemicals contains bio-actives which helps in reduction of various degenerative health disorders.

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STUDY OF QUALITY CONTROL AND PROCESSING OF RAW MILK

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ABSTRACT

Food safety and quality area unit essential problems that ought to incline much attention everywhere the planet principally from biological process quality and human health purpose of reading. Food safety may be a scientific field of study that deals with handling, preparation, and storage of food in ways in which forestall food-borne unhealthiness. Food safety system is usually categorized into two, specifically ancient and science-based systems. Food is used as a supply of malady transmission from one person to another; it additionally is a nutrient growth medium for a microorganism that may cause malady and unsafe agent for consumers' health. Factors that might be a supply of potential hazards in foods embrace ancient milk production accompanied with improper agricultural practices and poor sanitary setting in any stage of the food chain. Quality assurance is obligatory before the milk is consumed. Milk and milk product contaminants area unit classified into two, namely, infectious and non-infectious agents. Food-borne illnesses area unit typically infectious or poisonous in nature and caused by major infectious diseases like bacteria, viruses, parasites, or chemical substances obtaining access to enter the body through contaminated food or water. In this study total, bacterial count is a rough gauge parameter to measure the quality of milk, herd health, efficacy of farm sanitation, milk handling and storage and transportation temperature while coliform counts are significantly associated with level of hygiene since they are mainly of fecal origin. The result of this study clearly shows that the total bacterial count in the milk sold at values for good milk which is (<200000 CFU/ml). In the above study of species counting into the raw milk sample collected, the SPC count were shown enormously high into the month of april shows maximum 50-100 lakh in the 20% of collected samples and in the month of May maximum was100-150lakh in to the 15% of collected samples. By the identification of colliform the cfu count into the month of april was a maximum 4,14,000 CFU/ML and in MAY was 1900000. After the spc count and cfu/ml

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Investigation of phytochemical and antimicrobial activity of different extracts of leaves of *Barleria cristata* L. family acanthaceae

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Abstract
The antibacterial activity of the methanol and aqueous extracts of the leaves of *Barleria cristata* was investigated against Gram positive organism *Streptococcus pyogenes* and Gram negative organism *Escherichia coli* NCTC 10418 using well diffusion technique. Results showed that the methanolic extracts of *Barleria cristata* were effective against the test microorganisms. The percentage of zone of inhibition on *E. coli* by methanolic extract and aqueous extract is 78.13 and 66.45 respectively and the percentage of zone of inhibition on Streptococcus by methanolic extract and aqueous extract is 78.84 and 69.11 respectively. The results of the study provide scientific basis for the use of the plant extract in the treatment of wounds and skin diseases.

Keywords: *Barleria cristata*, *Streptococcus pyogenes*, *Escherichia coli*, well diffusion technique and antibacterial activity

Introductions
Ayurveda is traditional Hindu system of medicine which is incorporated in Atharva veda, the last of four vedas. It is based on the idea of balance in body systems through use of proper diet, yogic breathing and herbal treatment. Ayurveda considers three elemental substances as doshas which are called as vata, pita and kapha. According to ayurveda balance of these doshas results in health while imbalance causes disease. In India, use of medicinal plants has been in practice from ancient times. The system of medicine is prevalent in many other countries like Korea, China, Singapore and west Asia. The use of plants in treatment is not only confined to doctors but is also known to households. Now at present the tendency to shift from synthetic to natural based products and medicinal plants is growing all over the world but only one third of the infectious diseases known have been treated from these synthetic products (Sharma, 2001) [1]. Herbal medicines are defined as branch of science in which plant based formulations are used to alleviate the diseases (Joy *et al.* 2008) [2]. The other names for herbal medicines are botanical medicines or phyto medicines. Herbal medicines are plant derivatives which are given in various types of formulations some of which may have antibacterial activity (Ahmad and Beg, 2001) [3].

The antibacterial activity of plant extracts and phytochemicals can be evaluated by using antibiotic susceptible and microorganisms which are resistant. A microorganism is a microscopic organism which may be single celled or multicellular (Enne *et al.* 2001) [4]. These are diverse and they include bacteria and most protozoa. This group may also contain algae, fungi and some micro animals such as Rotifers. Microorganisms belong to prokaryotic members with no nucleus and organelles. Bacteria has two classes namely, Gram positive bacteria e.g. Streptococcus, staphylococcus and Gram negative bacteria Eg. *E. coli* and Pseudomonas. Antibiotics are also called as antibacterials (Madigan and Martinko, 2006) [5]. These are one type of antimicrobials used in treatment and prevention of bacterial infections. These antibiotics may be bactericidal or bacteriostatic in nature. The term antibiotic can also be referred as substance used against microbes.

Barleria cristata L. grows as a shrub. It belongs to family Acanthaceae which is a dicotyledonous flowering plant. It contains about 250 genera and 2500 species. In India 508 species are present. Southern China, India and Myanmar are the native places where wide range of these species is found.

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VALIDATION OF WHEAT MAPPING POPULATION FOR KARNAL BUNT DISEASE RESISTANCE USING MICROSATELLITE MARKERS: A MOLECULAR APPROACH

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ABSTRACT

Tilletia indica, a fungus responsible for causing Karnal bunt (KB) disease in wheat, poses a significant challenge to the grain industry not due to substantial yield loss but because of quarantine regulations restricting the free movement of affected grain in international trade. Various sources of resistance to KB have been identified, and understanding the genetics of this resistance is crucial for incorporating it into new wheat cultivars. Furthermore, the identification of PCR-based markers linked to KB resistance opens the possibility of employing marker-assisted selection schemes in breeding resistant wheat cultivars. This study involved generating recombinant inbred line (RIL) populations from crosses of susceptible cultivars HD-2009 and WL-711 with resistant parents HD-29 and HD-30. The F4 and F5 populations were evaluated for resistance against the KB pathogen under artificial epiphytotic conditions in a greenhouse. This research aims to leverage simple sequence repeat (SSR) primers to identify DNA markers closely linked to KB resistance genes in bread wheat. Four SSR primers (Xgwm88-6B, Xgwm337-1D, Xgwm637-4A, and Xgwm538-4B) specific for the KB resistance gene were used to screen wheat populations from a single cross, HD 30x HD 2009, and HD 29x WL711. Each primer revealed one to two resolvable bands. Notably, Xgwm88-6B, Xgwm637-4A, and Xgwm538-4B produced single bands of a specific base pair (bp), while Xgwm337-1D generated two alleles with amplicons of bp and bp. This study highlights the effectiveness of SSR technology and confirms the presence of the KB resistance gene in the newly developed RIL populations.

Myricetin: a potential plant-derived anticancer bioactive compound—an updated overview

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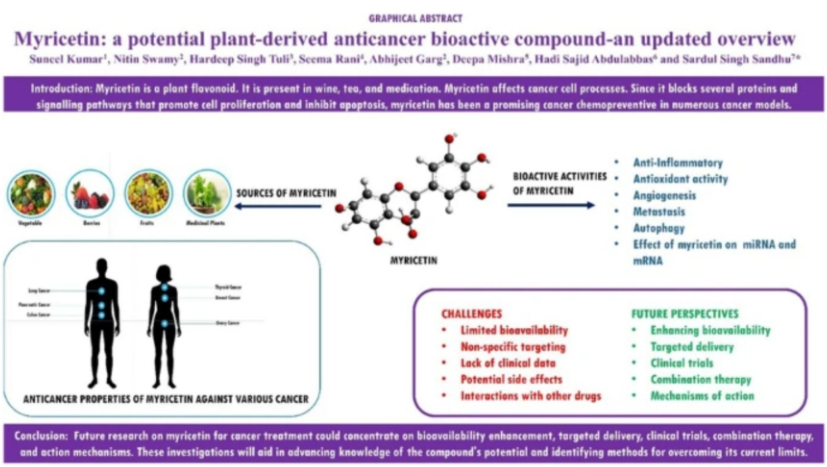
Suneel Kumar, Nitin Swamy, Hardeep Singh Tuli, Seema Rani, Abhijeet Garg, Deepa Mishra, Hadi Sajid Abdulabbas & Sardul Singh Sandhu

Abstract

The globe is currently confronting a global fight against the deadliest cancer sickness. Chemotherapy, hormonal therapy, surgery, and radiation therapy are among cancer treatment options. Still, these treatments can induce patient side effects, including recurrence, multidrug resistance, fever, and weakness. As a result, the scientific community is always working on natural phytochemical substances. Numerous phytochemical compounds, including taxol analogues, vinca alkaloids such as vincristine and vinblastine, and podophyllotoxin analogues, are currently undergoing testing and have shown promising results against a number of the deadliest diseases, as well as considerable advantages due to their safety and low cost. According to research, secondary plant metabolites such as myricetin, a flavonoid in berries, herbs, and walnuts, have emerged as valuable bio-agents for cancer prevention. Myricetin and its derivatives have antiinflammatory, anticancer, apoptosis-inducing, and anticarcinogenic properties and can prevent cancer cell proliferation. Multiple studies have found that myricetin has anticancer characteristics in various malignancies, including colon, breast, prostate, bladder, and pancreatic cancers. Current knowledge of the anticancer effects of myricetin reveals its promise as a potentially bioactive chemical produced from plants for the prevention and treatment of cancer. This review aimed to study the numerous bioactivities, mode of action, and modification of several cellular processes that myricetin possesses to impede the spread of cancer cells. This review also addresses the challenges and future prospects of using myricetin as a anticancer drug.

Graphical Abstract



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NUTRITIONAL AND MEDICINAL PROPERTIES OF MORINGA OLEIFERA : AN OVERVIEW

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The "miracle tree," Moringa oleifera Lam. (Moringaceae), is grown in many tropical and subtropical nations. It has shown to be a highly effective source of phytonutrients, making it suitable for both human and animal use in nutrition and medicine. It is inexpensive, easily obtainable, and rich in proteins, calcium, potassium, and multivitamins (A, B, and C). It also contains a special blend of zeatin, quercetin, sitosterol, kaempferol, and caffeoylquinic acid. This tree has various nutritional and medicinal properties in every area of it. With antioxidant, anti-inflammatory, antipyretic, antiepileptic, antitumor, anticancer, diuretic, antihypertensive, antispasmodic, hypocholestemic, antidiabetic, antibacterial, antifungal, antiulcer, and hepatoprotective qualities, it is a reservoir of dietary supplements and acts as a cardiac and circulatory stimulant. In addition to its therapeutic uses, it is employed in water treatment, livestock feed, reforestation projects, and heavy metal biosorbent applications.

INTRODUCTION

Mankind has been hunting for nourishment that will keep him healthy and active since the dawn of civilization. In the current era of technology and research, this fruitless hunt for new herbal medications and alternative sources of dietary supplements is still ongoing. The perennial, multipurpose, softwood tree "Moringa oleifera" of the monogeneric family Moringaceae is one such promising species that has successfully passed all tests of nutritional benefits, medicinal characteristics, environmental suitability, and ingestion safety. Some names for M. oleifera include "drumstick," "horseradish," "mother's best friend," "cabbage tree," "ben-oil tree" or "benzoil tree," and "miracle tree." It is a native of Indian sub-continent and is cultivated worldwide owing to its numerous utilities [1-3]. A single Moringa tree can provide leaf as a source of nutrition for human and livestock, seed-oil for cooking and biodiesel, seed-cake for water purification and wood to build shelter. Every part of this tree is edible and the leaves, roots, seeds, root-bark, stem-bark and pods have medicinal properties. The unopened flowers are eaten as vegetable or used to make tea which provides adequate amounts of calcium and potassium. The young pods are also used in various culinary preparations and pickles [4]. Moringa was highly valued in the ancient world. The history of Moringa dates back to 150 B.C. which reveals that the ancient kings and queens preferred Moringa leaves and fruit in their diet to sustain mental alertness and healthy skin. The ancient Maurian warriors of India were fed with Moringa leaf extract in the warfront. The elixir-drink was assumed to add them extra vigour and relieve them of the trauma incurred during war [5]. The nutritional value of Moringa leaves is of utmost importance because a single gram of leaf powder is packed with 25 times the iron of spinach, 17 times the calcium of milk, 15 times the potassium of bananas, 10 times the vitamins of carrots, 9 times the protein of yoghurt, and 0.5 times the vitamins of oranges. Apart from vitamins and minerals Moringa leaves have been characterized to contain a desirable nutritional balance of minerals, amino acids, and fatty acids [3,6]. Moreover, they contain various antioxidant compounds such as ascorbic acid, flavonoids, phenolics, and carotenoids [7,8,9]. Moringa tree products have been used to combat malnutrition, especially among infants and nursing mothers. Three non-governmental organizations in

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OVERVIEW OF TRADITIONAL, MEDICINAL AND VALUE-ADDED PRODUCTS OF CARICA PAPAYA

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The Carica papaya L., a tropical American fruit tree in the Caricaceae family, is also referred to as "papaya." Its seeds, leaves, and fruits contain bioactive components (carpaines, BITC, benzyl glucosinolates, latex, papain, zeaxanthin, choline, etc.) that are highly valued for their exceptional antioxidant, digestive, and nutraceutical properties. Papayas are rich in folate, pantothenic acid, zeaxanthin, lycopene, lutein, magnesium, copper, calcium, and potassium. They are also high in vitamins A, B, C, E, and K. Packed with fiber, antioxidants, and vitamin C, it lowers blood pressure, lowers the danger of aging, cancer, macular degeneration, cardiovascular disease, and stress; it also lowers cholesterol in the arteries, lowers body weight, raises platelet count, and manages dengue fever. With several in vitro and case studies, papaya leaf extract has been proven to be an effective treatment in combination therapy with contemporary medicine, particularly for cancer and numerous other viral disorders. Papaya cultivars have been grown by humans for millions of years due to their great commercial, medical, and agronomic benefits. Numerous studies on genetically modifying papaya to withstand biotic (e.g., mites, Phytophthora, herbicides) and abiotic (e.g., herbicide-induced toxicity) stresses have been published. Additionally, the modified papaya has been shown to delay ripening and extend its shelf life. Nevertheless, not all commercial papaya cultivars have been internationally adapted to incorporate the majority of these features. The genetics of the papaya has provided insights into the effects of domestication, evolutionary trends, and sex determination in fruit tree crops. It also serves as a potential step toward developing new cultivars to fight climate-oriented stress.

INTRODUCTION

A fruit tree native to tropical America is the papaya tree (Carica papaya L.). It is grown in tropical and subtropical areas all over the world. India is the world's greatest papaya grower, producing 13.9 million tonnes (mt) year, or 43% of the world's total, according to a recent report on papaya output (2020). On the other hand, the world's largest papaya consumer is the United States. Carica was once categorized under the Passifloraceae, Cucurbitaceae, Bixaceae, and Papayaceae families; however, it is currently a member of the Caricaceae family, which is made up of 35 latex-producing species that are separated into four genera: Cyclicomorpha, Jarillaand, Jacaratia, and Carica [1]. Some species previously attributed to Carica have been reclassified and are now assigned to Vasconcella [2]. Carica papaya L. originated in southern Mexico, the Philippines, and Central America [3,4]. The Caribbean coast of Central America, Argentina, Chile, and southern Mexico were identified as the origins of papaya, resulting from natural hybridization between Carica peltata and other wild species [5]. Papaya is domesticated in tropical and sub-tropical regions of the world (Asia, Africa, Oceania, and North America). According to FAOSTAT 2020, the chief producers are India, Brazil, Mexico, Indonesia, and Nigeria. In 2011, researchers from the Philippines reported the development of PRSV-resistant papaya by crossing papaya with Vasconcella quercifolia. Papaya fruits are natural gifts, possessing a large proportion of vitamins, macro and micro minerals, bioactive substances, and secondary metabolites. In addition to fruits, the leaves, stems, seeds, and other plant parts are high in alkaloids and flavonoids, which have

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A THOROUGH ANALYSIS OF ACACIA CARNETU (L.F.) WILLD.'S CHEMICAL COMPOSITION AND PHARMACEUTICAL ACTIVITIES

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In an effort to combat the spread of infectious diseases and pandemics, numerous studies on natural products have been conducted. Researchers are concentrating on investigating natural products for the treatment and/or management of various infections and/or disorders since they have structural diversity. The Fabaceae family and order's Acacia catechu (L.f.) Willd. performs a variety of pharmacological roles in the treatment of human ailments. Through an examination of the scientific literature, information concerning the chemical components and pharmacological properties of A. catechu was gathered and disseminated. Based on initial evaluations, A. catechu is demonstrated to be a noteworthy source of bioactive compounds with a broad range of biological and medicinal uses, including hepatoprotective, immunomodulatory, antidiabetic, antioxidant, antimicrobial, anticancer, antidiarrheal, anti-inflammatory, and antiviral properties. While the plant's metabolites have been linked to a variety of pharmacological uses, nothing is known about the plant's toxicity or clinical trials including its bioactive components. To successfully develop the plant's bioactive chemicals into a powerful medication, more research is needed on their variety.

With the beginning of civilization, humans have been messed with various infectious diseases and many lives have battled in adapting to them. Various preventive and/or treatment approaches have been established to counter them. Among them, natural products are a rich source or tool of research for the management of diseases for the welfare of humankind [1–3]. Isolation and identification of bioactive compounds or drugs from natural products' pool have a long history [4], and research on them has acquired tremendous profound due to their bioactive functions against different infections, diverse nature and structural complexity, cost-effectiveness, and least side effects [5, 6]. More than 50% of all drugs witnessed in modern medicines are through natural products and their derivatives [7]. In other words, approximately 35% of the global market of medicines have been run or originated through natural products [8]. With the growing research on medicinal plants, A. catechu is also one of the important bioactive plants. This study explores on chemical constituents and pharmacological functions of A. catechu through the literature-based analysis. The scientific information about A. catechu was gathered from articles by searching them in Google Scholar, PubMed, Elsevier, ScienceDirect, Scopus, Springer, Wiley online library, and Web of Science.

A. catechu is a deciduous thorny tree of up to 15–17 m height native to central and east Africa, Southern Asia, Bhutan, China, India, Pakistan, Myanmar, and Nepal [9]. It is a medium-sized tree with dark greyish-brown to dark brown barks, brown branches which are slender, puberulous when young, but glabrescent later, straight and grayish-brown stem, petiolate, bipinnately compound and alternate leaves, oblong and glabrous leaflets, white to pale yellow flowers in 5–10 cm-long axillary spikes with a campanulate 1–1.5 mm-long calyx, 2.5–3 mm long corolla, and pod-based fruits with ovoid seeds [10, 11].
The taxonomic position of A. catechu (L.f.) Willd. is given as follows:
Kingdom: Plantae
Division: Tracheophyta

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To Study The Dyeability Of Natural Dye For Sustainable Fabric (Cotton)

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Abstract

National dye is found from natural source such as from plant animal and mineral. Natural dyed cloth is more eco-friendly product. It is giving non-toxic, chemical free product and this does not harmful environment nature. In this study dyeing of cotton fabric with natural dye from Haldi, Anar, Katha extract. To know the effect of natural and chemical modern fixation of dye cotton fabric and fastness to repeated washing. The study adopted an experimental method. 100% cotton fabric(bleached) were taken for sample. The process of mordanting is done for increasing colour fastness of natural dye. Each mordant give different shades and its fastness is also different. The fastness of a natural dye on cotton fabric can be increased by using alum or potassium dichloride and or vinegar during pre-mordanting and mordanting process. Dyeing through National dye avoid pollution in the atmosphere and it is also cheap. In view of these advantage use of natural dye should be promoted.

Keywords: Natural dye, Mordant, Shades, Fastness, Washing

Introduction

Human and animal share the earth with plants and are dependent on them, India possesses rich variety of soils, climates and other ecological factors, which have endowed it with a vast forest wealth. Wood is recognized as the major forest produce. Apart from wood plants also give us other valuable products viz. Medicine, insecticides, edible and non-edible oils, gums, resins and oleoresins perfumery oils, spices, tannins and colouring matters known as dyes. Natural dues are obtained from vegetable, animal and mineral sources. Nature is full of fascinating colours and people had been exploiting then for dying garments, using them in good and many other items of the daily uses. It has been reported by ancient writers that there were at one time nearly thousand different Natural sources of dyes. Mains desire to decorate his environment has been evident since the very earliest period of civilization. Basic printing techniques and dyes were first applied in patterning directly on to the human body, but with the production of crude fabrics such colouring and patterning methods were soon transferred to cloth.

Two natural dyes, alizarin and indigo, have major significance. Alizarin is a red dye extracted from the roots of the madder plant, Rubia tinctorium. Probably the oldest known dye is the blue dye indigo, obtained in Europe from the leaves of the dyerswoad herb, Isatis tinctoria, and in Asia from the indigo plant, Indigofera

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A Study on Sustainable and Environmentally Friendly Fabric

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Abstract :- Sustainable and environmentally friendly fabric is effort to create an eco-intelligent product. Fabrics or clothing items is based on efforts across areas including eco-materials, social responsibility, water efficiency, renewable energy and recycling. In this study, identify the sustainable fabric. Sustainable fabric identified it in three ways: - Firstly, identify where the material comes from. It comes from stripping raw materials, damaging farming and agricultural practices, or from an animal, or it were the materials sustainably grown or recycled. Secondly, to know whether the raw materials need any processing before they can be used to make the fabrics. Some examples of sustainable fabric processing include weaving, knitting or using non-toxic dyes. However, many fabrics require bleaching, colouring with carcinogenic dyes, and chemical processing. One common example of the latter is the use of formaldehyde to prevent fabrics from wrinkling. The third thing to consider is a fabrics end-of-life prospects – where it is going to end up, and it is going to negatively impact people or the planet. We should consider the importance of wearing sustainably made and sourced fabrics. Even if a fashion brand makes clothes locally, reduces fabric waste and pays its workers fairly, their fabric choices may stop them from being able to call themselves truly sustainable.

Keywords :- Sustainable, Eco-materials, social responsibility, Water efficiency, renewable energy and recycling.

Introduction :- The textile industry is a big industry in the world, and employed more than ten million of people worldwide. Textile industry is one of the global industries that provides basic human needs. Sustainable and environmentally friendly fabric comes from eco-friendly resources like sustainably grown fibre crops or recycled materials. its second most important basic need of human life just after food and water. The transformation process is different that began with fibre and yarn and final product in the form of fabrics that involve various operations and produce various types of specific products. The textile industry produces number of different types of products, including automotive textiles, construction textiles, industrial textiles, medical textiles, protective textiles, geotextiles, agrotextiles, and sport textiles. As per the study in 2021 the global textile industry will be worth more than USD 1.04 trillion.

In spite of the interruption due to pandemic, the demand for textiles is will be more in the future, particularly with the rise of globalization, digitization and e-commerce as well as customer demand for a variety of items from this industry. Textile industry is a well-known industry for its contribution towards economy, and also well- known for its considerable environmental and social issues when it comes to long-term sustainability. There are many of environmental concerns, including the fact that this industry uses a great deal of energy and emits a great deal of pollutants. Water, fuel, and chemicals are all commonly used as

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Environmental Protection from Textile and Clothing Waste through Waste Management

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Abstract :- Global production of clothing and its consumption has increased in the last fifty years. With time, clothing has gained more importance as people associate every occasion, mood, season and status with clothing. It has become a way of making an impression and non-verbal communication. Textiles is the second biggest polluting industry. The average life span of a garment is roughly three years, and so, textiles generate a huge amount of waste. it can take 200+ years for the materials to decompose in a landfill. During the decomposition process, textiles generate greenhouse methane gas and leach toxic chemicals and dyes into the groundwater and our soil. Five per cent of all global landfills is being taken up by dumped textile waste. Waste management involves the processes of waste collection, transportation, processing, as well as waste recycling or disposal. Sustainable waste management systems include advanced management strategies to minimize environmental challenges and protect resources. Modern waste management strategies are geared towards sustainability.

Key words :- Textile waste, clothing waste, 5R'S of waste management, sustainability

Introduction :- Textile waste is the material that is discarded throughout the production process. This waste can be produced throughout each stage of product development, from spinning, weaving, dyeing, finishing, and even from the consumer end. This waste can be accidental or intentionally created for the purpose of efficiency. Scraps, damaged or defective material samples, fabric selvages and leftover fabric from the cutting process are also included in solid waste. In the clothing industry, there are different types of sections like cutting, bundling & shorting, sewing, printing, embroidery, finishing. In all section wastages produce. The cutting section is the main section to produce wastage in a clothing factory. It is not possible to avoid wastage during production or usage of textiles. Besides, a sensible analysis on the shopping behaviour and life cycle of a product among the consumers is essential. The huge quantity of textile waste dumped in landfills and incinerated can be reduced to a great level by understanding the dimensions of a product and its compatibility with nature.

Textile waste is classified into three categories-

1. **Pre-Consumer Textile Waste** :-It is comprised of

A. Materials before it reaches a consumer

- Fabric and Garment Sample
- Overstock
- Fabric from the end of rolls

It is also called production waste. The consumer never sees pre-consumer waste produced during industrial processing of textiles by the manufacturer. It includes scraps, damaged or defective material samples, fabric selvages and leftover fabric from the cutting process. On an average, about 15 per cent of fabric used in garment

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ODONATE ECOLOGY AND DIVERSITY - A REVIEW

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ABSTRACT

Together, dragonflies and damselflies, or odonates, are among the most common insects seen soaring above fields, forests, meadows, lakes, and streams. There are roughly 6,000 species in the world today. India is quite diverse, with over 500 species now recognized. The odonata are among the oldest orders of insects. About 250 million years ago, during the Carboniferous epoch, it originally appeared alongside mayflies (Ephemeroptera). Monsters from the Carboniferous era belong to the Odonata group; one such species, Meganeuropsis americana, had 71 cm wingspan, or nearly as long as a pigeon. Ancient insect species like dragonflies and mayflies were some of the first to acquire wings and take to the air. Dragonflies have perfected the art of flight and are still skilled acrobats. The order Odonata is divided into three categories depending on morphology: the Anisozygoptera, the Zygoptera, and the dragonflies (Anisoptera). Epiophlebia laidlawi, one of the two species mostly in suborder Anisozygoptera, is documented from Darjeeling (As per Record). In the field, dragonflies and damselflies are easily distinguished. Although their morphologies are very different, they have similar overall life histories.

Keywords : odonates, anisozygoptera, Zygoptera, and the dragonflies.

INTRODUCTION

Among the 1.9 million species that have been identified worldwide, insects make up nearly a million. According to taxonomists, there are between three and one hundred million species in the globe. Compared to estimations based on biodiversity ratios and macroecological patterns, this taxonomic-based estimate of diversity is different. Erwin (1982) [1] estimated 30 million species of arthropods based on the host range of guilds in beetle samples and subsequent hierarchical ratio extrapolations. This estimate was highly challenged; until the early 1990s, it was thought that there were two to three million species—two to three times as many as had been described—instead of the two to three million that had been identified [2-4]. Among the insects that hovers over forests, farms, meadows, ponds, and rivers most frequently is an odonate, which includes dragonflies and damselflies. There are over 6,000 species that are still alive today. India is indeed a fairly diverse nation with around 500 identified species. First it appeared alongside mayflies during the Carboniferous epoch, about 250 million years ago (Ephemeroptera). The Odonata of the Carboniferous period featured giants. Ancient insect species like dragonflies as well as mayflies were some of the first to develop wings and the capability of flying. According to morphology, the order Odonata is divided into the groups of damselflies (Zygoptera), anisozygoptera, and dragonflies (Anisoptera). Dragonflies and damselflies can be easily differentiated in the wild. Although they have different morphologies, they have comparable overall life cycles. More people are realising the use of dragonflies and damselflies as environmental aspects. There is additional research being done on dragonflies. Identify what they can reveal about India's biodiversity and habitat.

With origins in the Permian era, dragonflies are one of the oldest species of insects. The Order Odonata is currently divided into three suborders: Anisoptera (subequal wings); Zygoptera (equal wings); and Anisozygoptera. There are just four species of Anisozygoptera found in Asia. Along

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Metabolomic comparison and antioxidant activities of the of Broccoli and Cauliflower residuals

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ABSTRACT

Our body defends itself from oxidative stress via endogenous antioxidants. However, in case of deficiency, antioxidant supplements from plant and animal sources may help in maintaining overall health. The current research was conducted to evaluate the activity of enzymatic antioxidants like Superoxide dismutase, Ascorbate Peroxidase, Catalase, Glutathione Peroxidase, Glutathione Reductase, and non-enzymatic antioxidant Ascorbic acid in floret and stem of cauliflower and broccoli cultivar. Native PAGE was performed for SOD, CAT, and Glutathione Peroxidase. Antioxidant activity significantly varied among broccoli and cauliflower and their different parts. The activity of APX, GPX, and Protein was found maximum in Broccoli floret. Whereas SOD and CAT activity was higher in broccoli stems. Cauliflower floret had maximum ascorbic acid followed by broccoli floret. GR activity was highest in the cauliflower floret. Except for CAT & GR , all other enzymatic antioxidant activity like SOD, APX, GPX, was 2.5%, 47.59% and 63.59%, higher in broccoli floret as compared to cauliflower floret. CAT activity was 29.64% higher in cauliflower floret compared to broccoli floret. Our findings support future efforts to utilize broccoli and cauliflower agro-waste as sources of compounds for the nutraceutical and pharmaceutical industries.

Keywords: Oxidative stress, Antioxidant supplements, Enzymatic antioxidants, Broccoli and cauliflower cultivar

INTRODUCTION

Oxidative stress and free radicals are widely recognized as harmful to human health. When there is an imbalance between pro-oxidants and antioxidant mechanisms, it leads to oxidative stress. This condition can be caused by various environmental factors, including exposure to pollutants, alcohol consumption, certain medications, infections, a poor diet, toxins, radiation exposure, and more (Pizzino *et al.*, 2017).

Numerous studies have provided substantial evidence that oxidative damage to DNA, proteins, and other macromolecules significantly contributes to the development and advancement of various illnesses. These include cardiovascular diseases (CVD), cancer (Tousoulis *et al.*, 2017; Spickett & Pitt, 2018, Sullivan *et al.*, 2018; Trachootham *et al.*, 2019) as well as neurological disorders such as amyotrophic lateral sclerosis (Nowsheen et al., 2020), multiple sclerosis, Parkinson's disease (Reddy *et al.*, 2018), and Alzheimer's disease (Zhao & Zhao, 2020).

ROS, which stands for reactive oxygen species, encompasses highly reactive oxygen-containing molecules, including free radicals. Various types of ROS include hydroxyl radical, hydrogen peroxide, superoxide anion radical, nitric oxide radical, singlet oxygen, hypochlorite radical, and various lipid peroxides (Singh, 2022).

Antioxidants are molecules capable of inhibiting the oxidation of other molecules (Norma *et al.*, 2019). In simpler terms, antioxidants are compounds that prevent oxidation. They delay autoxidation by hindering the formation of free radicals and counteract oxidation by donating electrons from their hydroxyl (-OH) group. Additionally, they may indirectly reduce the production of free radicals by inhibiting the effectiveness or expression of enzymes that create free radicals or by enhancing the activities and expressions of other antioxidant enzymes (Hasanuzzaman *et al.*, 2020).

Our body employs endogenous antioxidants to defend against oxidative damage. However, when the endogenous antioxidants become insufficient or imbalanced in countering oxidants, exogenous antioxidant supplements can help restore the balance (Kurukutas, 2016). Exogenous antioxidants of animal or plant origin are primarily introduced through diet or nutritional supplementation. Plants contain phytochemicals or "plant chemicals," many of which exhibit antioxidant properties (Forni *et al.*, 2019). Brassica vegetables, such as cauliflower and broccoli, serve as excellent sources of natural antioxidants due to their high levels of carotenoids, tocopherols, and ascorbic acid. These compounds have demonstrated the ability to inhibit tumor growth, induce

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EFFECT OF HERBICIDES ON THE EARTHWORMS : A REVIEW

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ABSTRACT

Albeit the herbicides may provide a feasible option for enhancing weed control, it can become a toxicological risk to invertebrates such as earthworms. To some extent, these herbic ides are unrestrainedly used by farmers without considering the long or short term effects in soil medium. It is evident that most of these herbicides may cause the reduction of sensitive populations of certain groups of biota in soil medium. It is believe that in cases where these herbicides are used to treat soils, they are considered harmful to nematode, earthworms and other biological organisms. Studies on this aspect are important because earthworms are the common prey of many terrestrial vertebrate species such as birds and small mammals, and thus they play a key role in the biomagnifications process of several soil pollutants. It is now emphasized that, whereas higher concentrations of a pollutant can easily be assessed with the acute (mortality) test, contaminated soils with lower pollutant concentrations require more sensitive test methods such as reproduction test in their risk assessment. The aim of this paper was to provide a synopsis review of the effects of some herbicides to soil biological community.

Keywords : herbicides, acute test, contaminated soil and pollutant concentration.

INTRODUCTION

Earthworm play a valuable role in organizing and enhancing the supplements of soil, serve as a greater percentage (>80%) of biomass of terrestrial invertebrates. Hence, earthworm can be provide an early warning of degradation in soil quality as they act as an applicable bioindicators of chemical contamination of the soil in terrestrial ecosystem [1-3]. Earthworm show many sensitive reactions towards environmental influences and they also act as decomposers, due to this they generally used as test organisms. Earthworms are ecologically very important as many substances are responsible for the risk of secondary poisoning through feeding on worms. It can be possible that worms themselves suffered from much adverse effect [4-5]. The excessive use of herbicides or pesticides is responsible for the degradation of agro ecosystem sustainability [6]. Weeds and pests are responsible for degradation in agricultural crops [7]. To minimize weeds problems in crop production, the herbicide application should be on a regular practice [8].Various studies have showed that the qualitative and quantitative change in enzyme activity occurs due to the use of herbicides. The interactions between the herbicides and soil biota have practical significance by the reason of possible inhibition in microbial action increasing to soil fertility. Earthworms play a role in constitution and eradication of the soil fragments along with the organic matter transfer. Therefore they can affect the soil properties (pH, organic matter, nitrogen, granulometry, etc.). When the ingested soil passes through the gut of earthworm, it (soil) undergoes some chemical and microbial changes [9-13]. The main concept is that, these herbicides can affect soil and soil creatures through both direct and indirect way. Generally herbicides had significant effect on earthworms and other soil organisms. Butachlor has been revealed to be greater toxicity on earthworms. On the other hand, herbicides can also alter the enzyme activities. In a laboratory study, Glyphosate was exposed to inhibit the phosphatase activity by up to 98% [14]. Besides, glyphosate and atrazine both are responsible for the stimulation of urease activity.

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DISEASES OF FRESHWATER FISHES IN INDIA : A REVIEW

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ABSTRACT

India stands as one of the leading countries in aquaculture production, providing crucial economic support to many people in the country. However, the occurrence of diseases has emerged as a primary hindrance to the sustainable production and trade of aquaculture products. Various stress factors, including inadequate physicochemical and microbial quality of culture water, poor nutritional status as well as high stocking density, can lead to infections by opportunistic pathogens. The presence of different opportunistic bacterial pathogens and parasites poses a significant threat, causing substantial losses to the fish industry in terms of heightened morbidity and mortality, diminished growth, and increased expenses on the use of chemicals for preventive and control measures. Therefore, the present review sheds light on the common freshwater fish diseases in India and their treatment, aiming to promote sustainable aquaculture.

Aquaculture is a fast-growing food production sector with 122.5 million tonnes (MT) total of production globally in 2020 (SOFIA, 2022). In which, Indian aquaculture production is pegged at 8.64 MT in 2020 (SOFIA, 2022). The surging demand for fish, coupled with a decline in marine catches, has exerted significant pressure on the aquaculture industry, driving the need for intensified operations. Various organisms suitable for cultivation are reared in different types of culture systems. There are three main types of cultures: open, semi-closed, and closed cultures. Open culture systems include cage culture, pen culture, rack culture and raft culture. Semi closed culture system includes pond and raceway culture and closed culture system include Biofloc system and Recirculating aquaculture system (RAS). Fish are highly susceptible to various pathogens, especially when they are cultivated under controlled conditions. Disease outbreaks occur due to inadequate cultural conditions, stress, the suppression of the host's immune system, high stocking densities with improper management, and the virulence of pathogens (Kennedy et al., 2016). Ponds that are wellmanaged typically remain disease-free, but a serious problem arises from carelessness in stocking, feeding and management practices. As they say, prevention is always preferable over the treatment, so it is essential to take measures to prevent the entry of pathogens into the culture pond. Although several treatment methods are available, they can be difficult and often impracticable for ponds containing a large number of fish. The most efficient technique to prevent the spread of disease is the removal and extermination of infected fish from the pond. Whenever possible, disease-resistant fish should be selected for cultivation.

TYPES OF DISEASES IN AQUACULTURE

Occurrence of diseases in aquaculture is a result of complex interaction of host, pathogen and environment. There are three types of diseases Infectious diseases which include bacterial, viral, fungal and parasitic. Non infectious diseases which include environmental and nutritional diseases and other types which include genetic and neoplastic diseases. The World Organization for Animal Health (WOAH) or Office International des Epizooties (OIE) have listed major diseases in fish aquaculture (OIE, 2021) viz., Epizootic ulcerative syndrome, Carp edema virus, Epizootic haematopoietic necrosis diseases, Gyrodactylosis, Infection of covert mortality nodavirus, Infection

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FRESHWATER FISH DIVERSITY OF SOME RIVERINE, LAKES AND RESERVOIRS SYSTEM IN INDIA - A VIEW

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Fish contribute faintly more than one half of the total of vertebrates and India contributes to about 7.7% of global fish diversity. Fish and their diverse progressive phase sometimes find it difficult to recognize by morphological feature alone because of the high variety and phenotypic plasticity. Even within the species of fish, individual genetic distances may be found depending on the environmental stress and water quality which play an important role in its minor morphometric variations. There remains a need for taxonomic experts for single specimen identification. For less experienced user or non-specialist, it is difficult to identify the species which they encounter. Biodiversity is a term that refers to the variety and variability of life on earth. It includes variation among genes, species and functional traits. Among life forms, it is commonly measured in terms of richness, evenness and heterogeneity (Cardinale et al., 2012). Noss (1990) recognized composition, structure and function as main attributes of biodiversity and bolstered those attributes hierarchically into nested form by including other organization levels: regional landscape, community-ecosystem, population species and genetic. Biodiversity can be measured as to genetic diversity, species characteristics (individuality, number and accumulation), biotic communities, their processes and structure (Press & Delong, 2002). An ecosystem that has rich biodiversity provides more alternatives for transferring energy and also has a better ability for resisting shocks like fires, flood etc. compared to a system with low biodiversity (Folke et al., 2002). Cardinale et al. (2012) concluded that biodiversity damage changes the ecosystem functioning and also their ability to deliver better goods and services needed to flourish a society. India, a biologically diverse country hosts 7.6% of all mammalian, 12.6% of all avian, 6.2% of all reptilian, 4.4% of all amphibian, 11.7% of all piscine, and 6.0% of all flowering plant species (Stephen et al., 2015). Sampling, identifying and arranging a species systematically are the pioneer work toward protection of biodiversity. Thus, it is a duty of researcher to precisely identify a species for the purpose of conservation and sustainable use.

Fish are cold-blooded aquatic chordates resides in seas, river, lakes, canals, reservoirs, estuaries etc., and have a pharyngeal gill for respiration. Fish contributes faintly more than one half of the total vertebrates with 34300 species. India contributes to about 7.7% of global fish diversity, of which 1,673 are marine and 994 are freshwater (Froese & Pauly, 2020) and also in various ways to the diversity of the aquatic ecosystem. Coad and Murray (2006) estimated more than 32,000 valid species of fish on earth included in 85 orders and 536 families and 43% of fishes are freshwater fishes. Earth's surface freshwater encompasses only a small share but involves a large number of fish species. Fishbase (www.Fishbase.org) classifies fish species of fresh and brackish water into the following categories (a) exclusively freshwater, (b) occurring in fresh and brackish waters (c) or in fresh, brackish and marine waters.

An extensive study on the taxonomy and biology of the freshwater fishes in India has been achieved. Scientific study on Indian freshwater fishes started with Hamilton (1822). Moreover, several magnificent contributions to Indian fish fauna were made by Talwar and Jhingran (1992), Menon (1999) and Jayaram (2010).

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A View on the Antioxidant Potential of Medical Plants and Its Future Prospects

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Abstract :- Almost all societies have employed medicinal plants as a source of medicine. In both industrialised and developing nations, assurance of the efficacy, safety, and quality of medical plants and herbal products has recently taken centre stage. The Vedas and the Torah both mention the widespread usage of herbal medicines and healthcare products. Since ancient times, people have utilised medicinal plants to preserve and taste food, treat illnesses, and prevent diseases like epidemics. Free radicals and toxic substances are scavenged from our bodies by natural antioxidants found in plants. The therapeutic capabilities of medicinal plants have been passed down over the ages within and among human societies in addition to their antioxidant potential. The biological characteristics of plant species used around the world for a variety of reasons, including the treatment of infectious diseases, are typically the result of active chemicals created during secondary metabolism. A growing number of reports on pathogenic microorganisms that are resistant to antibiotics have led to the scientific confirmation of data on the antimicrobial activity of many plants that were previously thought to be empirical. Numerous studies have attempted to describe the chemical makeup of these plant antimicrobials and the mechanisms involved in microbial growth inhibition, either separately or in conjunction with conventional antimicrobials, with the specific goal of treating disease. Products derived from plants may potentially control microbial growth in a variety of situations.

Keywords :- Medicinal Plants, Traditional Medicine, Antioxidants, Phytomedicines, Antioxidant Potential

Introduction :- Since the revelation that plant extracts include a wide variety of secondary metabolites with antioxidant potential in addition to minerals and primary metabolites, the therapeutic use of plants has taken on increased significance. The term "medical plants" refers to a variety of plant species employed in herbalism, some of which have medicinal properties. More than 3.3 billion people in the less developed countries regularly use medicinal plants since they represent the "backbone" of traditional medicine. 2000) (Davidson). These medicinal plants are regarded as a rich source of components for the creation and synthesis of medications. Also, these plants are essential to the growth of human cultures all across the world. A vast variety of environments on the Indian subcontinent support a very high diversity of plant species. Higher plants have roughly 17,000 different species, of which about 8,000 are utilised medicinally by village societies, notably tribal people, or in conventional medical systems like the Ayurvedic system. In most poor nations, the use of traditional medicine and medicinal plants as a foundation for the maintenance of good health has been generally acknowledged since 1996 by UNESCO. Furthermore, the extraction and creation of numerous medicines and chemotherapeutics from these plants as well as from traditionally used rural herbal remedies have led to an increase in the reliance on the usage of medicinal plants in industrialised countries. 1998, UNESCO. Traditional medical practises have gained prominence during the past ten years on a global scale. According to recent estimates, a significant section of the population in many developing nations relies significantly on traditional healers and medicinal herbs to

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Shatavari (Asparagus Racemosus) : A Therapeutic Herb

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Abstract :- Asparagus racemosus, traditionally called as shatavari means "who possesses a hundred husbands or agreeable to many". It is regarded as a feminine tonic in Ayurveda. For the prevention and treatment of female reproductive problems such sexual debility, ammenorrhea, dysmenorrhea, dysfunctional uterine haemorrhage, endometriosis, gonorrhoea, prolapse of the uterus, etc Ayurveda recommends asparagus racemosus (Shatavari). In cases of inadequate lactation, it is also advised as a galactogogue. Several medical professionals have utilised asparagus racemosus successfully as an anti-inflammatory, anti-microbial, and immunomodulator for numerous infectious disorders. Moreover, dairy animals' ability to reproduce and produce milk can be enhanced by asparagus racemosus. Asparagus racemosus use can help strengthen the immune system, preventing infection of the udder and reproductive organs as a result. Moreover, it can be used successfully to lessen dairy animals' stress and increase productivity, resulting in the production of pure, healthy milk from them. Asparagus racemosus has a long history of use as food and a herbal remedy. For the treatment of stomach ulcers, liver problems, inflammation, immunological disorders brought on by stress, dyspepsia, and other conditions, all portions of this plant are therapeutically significant. It also acts as a galactogogue and lowers apoptosis. Its extracts made of water and alcohol function as potent antioxidants, immune system boosters, and antitussives. It controls the amounts of cholesterol and blood lipids. Its bioactive components, including as phytochemicals (flavonoids and saponins), are used in a variety of pharmacological processes. This brief study clarifies the significance of it and its practical methods for treating numerous disorders.

Keywords :- Asparagus racemosus; Extracts; Bioactive moieties

Introduction :- One of the oldest still-practicing medical systems in the world is called Ayurveda, which is derived from the ancient Sanskrit roots "ayur" (life) and "ved" in India's ancient history (knowledge). It provides a rich, all-encompassing outlook on living a healthy life. Originating in India some 5000 years ago, it has since diffused its essence throughout the world and taken a prominent place in healthcare systems. The Ayurveda is a completely herbal system of medicine. A. racemosus, popularly known as "Shatavari," is effective in treating internal heat and chronic fever as well as madhur rasam, seetveeryam, and som rogam. This herb works well for issues with the female reproductive system. Asparagus racemosus is listed as one of the formulae to cure diseases affecting women's health in the two primary works on Ayurveda remedies, Charak Samhita authored by Charak and Ashtang Hridyam written by Vagbhata. Perennial asparagus racemosus has a horizontal root stock, substantial roots, and long young shoots that are consumed as vegetables. The Indian herb Shatavari is another name for it. In India and the Himalayas, this plant is primarily grown in tropical and subtropical climates. Moreover, this plant is grown in Indonesia, Australia, Sri Lanka, and tropical Africa [2]. Asparagus is a member of the Asparagaceae family [3]. A woody stem plant with needle-like leaves and a tiny white blossom is called Asparagus racemosus [4]. The Greek words "Stalk" and "Shoot" are the roots of the name asparagus. In the realm of asparagus, there are about 200 species. India is where it is typically grown. Several of its species, including Asparagus odsendens and Asparagus gonaclades, are utilised in alternative medicine. The root of asparagus

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Research Article

FIRST REPORT OF FRESHWATER MOLLUSCA (GASTROPODS AND BIVALVIA) IN JOHILLA RIVER AT UMARIA DISTRICT (M.P)

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Mollusca, Bivalves, Gastropods, Freshwater, Johilla river.

ABSTRACT

Freshwater molluscs play a pivotal role in the freshwater ecosystem. Mollusca diversity of Johilla River was studied during August 2022 to September 2023. In present study, attempts have been made to collect, classify and identify Mollusca in river Johilla in Madhya Pradesh. The first report of Mollusca from the Johilla River in Umaria District has been investigated. This paper gives an updated nomenclature with a Checklist/Status of 25 species from 11 families of Mollusca (13 Species are belonging to Class Gastropoda and 12 Species to Class Bivalvia) were found in this zone of the river. The Shannon's Index of Mollusca H=2.871538658 and Simpson C=0.068555235 was determined. For the first time, a comprehensive catalogue of Mollusca recorded from the Umaria district's Johila river area is presented. More research is needed to examine sources and a much wider geographic area.

INTRODUCTION

The second-largest phylum is Mollusca. The world's most diversified environment is aquatic. In the entire animal kingdom, mollusca have the second-largest and richest fauna behind insects. Molluscan species are widely distributed in freshwater, marine waters, and on land. The phylum mollusca is divided in seven classes, of which only five are represented in India while only two are found in freshwater i.e., Gastropoda and Bivalvia. Global estimates number of described living species of mollusca varies from 50,000 to a maximum of 1,20,000 species. A conservative estimate includes 66,535 species for the world. Mollusca diversity in India is 7.62 percent of the total global diversity i.e., 5070 species.

Almost all aquatic ecosystems, including rivers, lakes, streams, swamps, subterranean aquifers, springs, temporary ponds, drainage ditches, and other transitory and seasonal waterways, are home to freshwater gastropods, with the exception of Antarctica. Most aquatic organisms are submerged, and many are adapted to specific ecosystems with aquatic flora, stones, boulders, wood, and other solid surfaces. Some are able to survive without water for extended periods of time (e.g., Ampullariidae), while others can spend extended amounts of time aestivating in soil during dry seasons. Due to extensive anthropogenic activity including changes in land use and environmental degradation, the tropics have experienced a significant loss of biodiversity. Large temporal changes in their environment place severe ecological limitations on natural populations of freshwater gastropods; their viability depends on their physiological ability to withstand these fluctuations (Kalyoncu, 2009). Gastropods typically play a dominating role in freshwater ecology by supplying food for many species and grazing on massive volumes of algae and debris (Agudo-Padron, 2011). According to recent assessments, the tropics are losing biodiversity at an alarming rate (Sodhi, 2008). However, little is known about the magnitude of loss in lesser-known groups, particularly invertebrates. In this work, we highlight the diversity and richness of snails, as well as the importance of snail conservation. The goal of this study is to examine the environment and biodiversity of freshwater Molluscs, as well as to detect the diversity of species in the Umaria region's river Johilla.

MATERIAL AND METHODS

The present research will be carried out in the Johilla River Umaria district. Umaria District lies under Shahdol, division the surface of the district may be divided in to 4 different Physiographic regions, the shale, sandstone, plateaus and Pindaric basic. It is located between 22^0Latitude and $82^0$11'Longitude and is situated on the Vindhyan plateau at elevation of 330m. It is a tributary of the Son River, which itself is a tributary of the Ganges River.

The Johila (23.645°N 81.236°E) originates at a place called Jwaleshwar in Maikal hills, 10 km from Amarkantak in Anuppur district of Madhya Pradesh. It merges with Son River in Manpur tehsil of Umaria district (Map 01). The studies have been done for one year from August 2022 to September 2023. The samples with screened material were washed into a

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A hasty survey on diversity of moths (Lepidoptera: Heterocera) from Bargi region of Jabalpur (M.P.)

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Abstract
Lepidoptera is an order that includes moths (Heterocera). A preliminary analysis of the moth fauna in the catchment of the Bargi reservoir was conducted between 2021 and 2023, and it revealed a total of 30 moth species. Every attempt was made to discover and preserve the secret fauna of the Narmada basin and some nearby locations for the preservation of the environment's health. To ascertain the variety and occurrence of moths, collection of moths was done throughout the year. 30 moth species overall, belonging to 09 families, 29 Genus were obtained from the reservoir by the present findings utilizing simple light traps that were in operation from nightfall to dawn. Among the families represented in the collection samples were Noctuidae, Arctiidae, Pyralidae, Geometridae, Sphingdae, Saturniidae, Eupterotidae, Zygaenidae and Cosmopterygidae. There may be opportunities for new records, according to the study. The study has also indicated that there are possibilities of new records of moth family, genus and species of in Madhya Pradesh.

Keywords: Heterocera, Bargi reservoir, light trap, diversity, indicator

Introduction
The Narmada River is one of the most important aquatic resources in Madhya Pradesh, as well as an important ecological hub in central India, and is thus known as an epicentre for biodiversity research. Rich biodiversity indicates the ecological balance in the area, which is necessary for human survival (Ashok, 2017; Verma, 2018) [1, 25]. The anthropogenic activities, electronic wastes and climate change influence the biodiversity and sustainable development (Verma and Prakash, 2020a; Verma, 2021; Prakash and Verma, 2022) [27, 25, 20].
Insects are the largest (Verma and Prakash, 2020b) [28] and most diverse class, with both moths and butterflies belonging to the same order, Lepidoptera, which means "Scaled wings" in Greek. Moths (Heterocera) are one of the most diverse groups of insects. There are approximately 1, 27, 000 species of moths worldwide, with over 5000 species reported from India (Paul *et al*., 2016) [18]. As per reports of ZSI (2017), a total of 313 species/subspecies of moths belonging to 221 genera and 25 families from central India, revealing a new record of 48 species of moths pertaining to genera and families. However, the Jabalpur moth fauna is represented by 42 species belonging to 38 genera and 6 families. Moths are important agricultural pests (Sharma, 2011; Sharma and Bisen, 2013) [23, 22], night pollinators (Devoto *et al*., 2011) [8], and ecological health markers in urban vegetative areas (Holloway, 1985) [12]. The pesticides have negative effects on insect pests (Prakash and Verma, 2014) [19]. However, moth research is severely underfunded in central India. This study was primarily conducted to elucidate the biodiversity of previously unstudied moth fauna.

Materials and Methods
The findings presented here are based on random surveys carried out January 2021 to December 2023 in Bargi region, (35 km from Jabalpur bus stand) in Jabalpur region of river Narmada. Jabalpur is located between 23°10'N latitude and 79°56'E longitude. Moths are nocturnal so Light trap was use for the collection of them. Light traps were in the evening onwards till morning on next day using a 160W mercury vapour bulb over a three by three white cloth sheet which was hung between two vertical poles. The moths sitting on the white cloth were picked into the killing bottles containing chloroform ($CHCl_3$).

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Edible Cutlery - A Revolutionary Contribution to The Society

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Abstract: Cutlery only includes those utensils which are used to cut food like knife, spoon and fork. Early humans utilized Natural materials including stone, wood, shells, and animal and fish bones to contain and distribute food in them. Plastic tableware and kitchen utensils first appeared after World War II, when metal was hard to get by. Companies began producing plastic utensils in the 1960s as a less expensive substitute for traditional silverware. These single-use plastic utensils were created to be used once and then thrown away, eliminating the need to clean and maintain them and saving precious resources like water and power (Datta et al, 2021). With the use of plastic cutlery solid waste production is increasing, particularly plastic garbage. Which are released into the environment and pollute the biosphere. Although an appealing choice, plastic cutlery is potentially harmful to the environment and human health. According to the Times of India, 22,000 tons of plastic waste is generated in India from plastic cutlery supplied with food through online food delivery systems. The recent prohibition on plastics and the environmental risk created the idea of biodegradable cutlery. "Biodegradable" refers to the ability of things to get disintegrated by the action of micro-organisms such as bacteria or fungi biological (with or without oxygen) while getting assimilated into the natural environment. Biodegradable cutlery can be edible or non-edible. According to (Patil & Sinhal, 2018) durability, ease of use, biodegrability, alternative of metal and plastic, being novel and uniqueness necessitated the production of biodegradable cutlery. Cutlery that can be used in place of plastic cutlery and could be eaten is known as edible cutlery. On the basis of edibility, applicability and raw material used in making, edible cutlery is classified into different types. The purpose of this review is to study the various ingredients used in making edible cutlery such as flour and vegetable wastes and the method of preparation.

Index Terms **- Biodegradable, edible, cutlery, disposable, ecofriendly, pollution, solid waste, plastic, plastic waste management.**

I. INTRODUCTION

The modernization of the society has added many new aspects to the lifestyle. For example, the invention of machines made for domestic work has increased the working capacity, efficiency and reduced the consumption of time and human energy. Similarly, plastic / disposable cutlery also brought a new revolution in industrialization along with reducing the consumption of time and human energy. According to the Oxford Dictionary cutleries are knives, forks, and spoons, used for eating and serving food. Both crockery and cutlery are tableware but there is a difference between the two. According to TradeIndia.com Cutlery only includes those utensils which are used to cut

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PROBIOTICS AND PREBIOTICS

A GLOBAL PERSPECTIVE ON ENHANCING HUMAN WELL-BEING

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Abstract: This comprehensive exploration "Probiotics and Prebiotics: A Global Perspective on Enhancing Human Well-Being," dives into the game-changing potential of these microbial agents in enhancing human health on a worldwide level. The article explores the origins of probiotics in conventionally fermented foods, emphasizing how they have evolved into contemporary nutritional powerhouses. Additionally, it emphasizes the critical function of prebiotics in supporting the gut flora, allowing for a better understanding of their combined effects on immune system regulation, digestive health, and the potential prevention of chronic diseases. This global viewpoint reveals the dynamic interaction between these microbes and the human body, drawing on a wealth of scientific research and clinical insights. It provides a comprehensive understanding of how probiotics and prebiotics might contribute to a healthier, happier world population.

As we venture through this investigation, we experience the dietary sources, clinical applications, and arising difficulties related with probiotics and prebiotics. The article suggests that the symbiotic relationship between humans and these microorganisms may hold the key to a brighter and healthier future by emphasizing the promise of personalized interventions and innovative research.

Index Terms – **Probiotics, Prebiotics, Gut Microbiome, Digestive Health, Global Health**

1. INTRODUCTION

In recent years, the areas of nutrition and healthcare have seen a tremendous shift in emphasis from traditional methods to a more holistic understanding of the complex interaction between the human body and the billions of microbes that live inside it. This paradigm shift has opened the door to a thorough investigation of probiotics and prebiotics, two essential elements that hold the potential to improve human well-being on a worldwide scale. Prebiotics, which are non-digestible substances that feed these microorganisms, and probiotics, which are healthy live microbes, have shown promise in supporting immunological health, boosting digestion, and enhancing general quality of life.

Probiotics' importance to human health cannot be overemphasized. These microbes, which are frequently present in many fermented foods and dietary supplements, are essential for preserving a healthy gut microbiome. Numerous health advantages, such as better digestion, increased nutritional absorption, and the avoidance of gastrointestinal problems, are linked to a balanced gut microbiota. Probiotics have also been associated with immune system modulation, which may lower the risk of infections and autoimmune illnesses

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A review on fourth generation drying techniques of fruits and vegetables

Dr. Rajlakshmi Tripathi and Apoorva Soni

Abstract
Food is our basic need. In developing countries, where providing enough food according to the population is a complex problem, the wastage of food adds to the problem. Fruits and vegetables are an integral part of our diet, which provide us vitamins, minerals and antioxidants along with fiber. Due to their high moisture content, fresh fruits and vegetables have a low storage capacity and are highly perishable. Fruits and vegetables decay because of microbiological, chemical, or physical damage. Developers and food processors use a range of preservation techniques to reduce post-harvest losses, increase availability, offer variety, and increase the value of the products they produce. Food preservation is a comprehensive procedure that entails numerous food processing steps to maintain the food's internal and external quality at the required level in order to preserve its nutritional value and maximize its benefits. Dehydration technology has seen several alterations due to human curiosity and the expansion of civilization. Successful innovations include fourth generation drying techniques, which need less time and effort to create goods of higher quality. Through this review, the working principles of various drying processes and the outcomes of their use in diverse studies have been examined. While freeze drying can keep the color and shape of the fruit and vegetable, the IR Drying Technique saves more time and energy. One of the simplest and least expensive ways to dehydrate is through microwave drying. The organoleptic qualities of food can be preserved with the osmotic-dehydration approach while still producing a dry product. Depending on the nature of the food product and the available resources, better quality dried products can be prepared by using suitable dehydration techniques as per the requirement.

Keywords: Fourth generation, drying techniques, fruits, vegetables, combined method of drying, preservation

1. Introduction
Due to their high moisture content, fresh fruits and vegetables have a low storage capacity and are highly perishable. Fresh fruits and vegetables have a moisture content of 90 to 95%. Enzymes, respiring products, and the water-losing impact are the main post-harvest properties shared by all fresh fruits and vegetables. Fruits and vegetables decay because of microbiological, chemical, or physical damage. All of these impacts are significant contributory elements that determine the quality of fruits and vegetables as well as consumer preference [Nath S *et al*. 2007] [41]. Fruits and vegetables' acceptability and organoleptic qualities are impacted by these losses [Rehman MS, 2007] [50]. Therefore, to decrease post-harvest losses, increase availability, offer variety, and increase the value of the products they produce, developers and food processors employ various preservation procedures.

The process of preservation entails an examination and comprehension of the entire food production and distribution system, including cultivation, harvesting, tillage, processing, packaging, transportation, storage, and consumption. Food preservation is a comprehensive procedure that entails numerous food processing steps to maintain the food's internal and external quality at the required level in order to preserve its nutritional value and maximize its benefits. Traditional methods for preserving food while maintaining its nutritional and organoleptic qualities include drying, cooling, and fermentation. Advancements with new dimensions have emerged in conservation approaches over time and in response to requirements [Amit *et al*. 2017, Alice L, 2021] [53, 3]. A method of food preservation prevents food from spoiling after harvest and from being wasted. Food waste has recently emerged as a major problem on a global scale.

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Flexseed in diet: A strategy to promote human health: A review

Maneesha Jharlya, Apoorva Soni and Dr. Rajlakshmi Tripathi

Abstract
Alpha linolenic acid, lignan secoisolariciresinol diglucoside, lignan secoisolariciresinol diglucoside, and fibre are all abundant in flaxseed. Through their anti-inflammatory action, anti-oxidative capability, and lipid regulating capabilities, these chemicals provide bioactivity beneficial to the health of both humans and animals. This article discusses the properties of consuming flaxseed or its bioactive ingredients. This review also covers the advantages of giving flaxseed or the specific bioactive components on health and disease. The benefits and drawbacks of dietary flaxseed in relation to various cardiovascular illnesses, cancer, gastrointestinal health, brain development and function, as well as menopausal women's hormonal status, are all comprehensive issues for discussion. Phytochemicals are currently gaining popularity as bioactive dietary components. As consumers become more health concerned, functional foods are becoming a more attractive area of study in food science. Flaxseed is grown around the world for its fibre, oil, medicinal properties, and nutritional value. In this overview, flaxseed's lignans, dietary fibre, and essential fatty acids are examined along with their nutrients, anti-nutrients, functional characteristics, digestion, metabolism, and health effects.

Keywords: Flaxseed, functional food, diabetes, menopause, microbiota, cardiovascular disease, and diabetes

Introduction
Flax (*Linum usitatissimum*), a member of the Lineaceae family, is an annual herb with blue flowers and small, flat seeds that range in colour from golden yellow to reddish brown. The texture and flavour of flaxseed are crisp (Morris 2007; Rubilar *et al*. 2010) [101, 105].
An impressive and expanding body of research on dietary flaxseed supports its efficacy in treating a number of medical disorders. Today's knowledge of flaxseed's health advantages and how to take it to get those benefits is vastly different from that of the late 20th century, when there was little information available. The amount of research on the effects of dietary flaxseed has drastically risen. We now understand the diseases that flaxseed can treat or prevent, the health benefits that flaxseed can offer through food, the bioactive components of flaxseed that frequently offer these health benefits, and the forms of flaxseed that the body needs to absorb these bioactives. Animal studies have yielded some, if scant, information on the influence of disease.

Functional properties of flaxseed constituents

Functional ingredient	Applications	References
Mucilage	Emulsifier & stabilizer in sauces, sausages, meat emulsions, salad dressings	[Stewart and Mazza 2000] [91]
	Anti-staling agent in baked products	[Lipilina and Ganji 2009] [92]
	Improves cooking quality of noodles	[Kishk *et al*. 2011] [93]
	Functional food ingredient (interaction of mucilage and protein regulate blood glucose level)	[Singer *et al*. 2011] [94]
sProtein	Stabilizer & emulsifier in ice cream, sauces and meat emulsions	[Martinez-Flores *et al*. 2006] [95]
	Antifungal property	[Xu *et al*. 2008a, b] [96]
	Viscoelastic texture to extruded pastes for breakfast cereals and snacks	[Wu *et al*. 2010] [97]
	Enhances nutrition in gluten free meal	[Gambus *et al*. 2009] [98]
	Egg and gelatin substitute in baked goods and ice cream	[Shearer and Davies 2005] [99]
	Functional food ingredient	[Moller *et al*. 2008] [100]

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POSITIVE IMPACT OF BITTER GOURD ON DIABETIC PATIENTS- A REVIEW

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Abstract: *Momordica charantia*, often called as bitter gourd has traditionally been used to treat diabetes and its consequences in Ayurvedic and Chinese medicine. Bitter gourd is generally ignored owing to its bitter taste even though it is good supply of quite a few nutrients. *M. charantia* is one of the most promising herbs for diabetes today, with both traditional use and contemporary scientific evidence of its therapeutic function. According to several published clinical studies, bitter melon extract from the fruit, seeds, and leaves contains many bioactive components that have hypoglycemic effect in both diabetic animals and people. It has many bioactive compounds such as gallic acid, chlorogenic acid, polysaccharides, antioxidants, catechins, charatine, alkaloids, quinine, flavonoids, triterpenoids etc., additionally a good source of minerals and vitamins. Several medicinal effects of bitter gourd have been considered such as antidiabetic, anti-mutagenic, antioxidant, anti-lipolytic, analgesic, hypoglycemic, anti-viral and immunomodulatory. The current review aims to emphasize the antidiabetic activity of *M. charantia*, its bioactive compounds and clinical trials to clarify its potential therapeutic effects on diabetes.

Index Terms **– Antidiabetic, Bioactive Compounds, Charatin, Bitter Gourd, *Momordica Charantia.***

1. INTRODUCTION

Diabetes mellitus is a highly prevalent metabolic dysfunction affecting the human population worldwide which is defined by hyperglycemia and caused by insulin impairment. Chronic hyperglycemia, a typical side effect of unchecked diabetes, damages, impairs, and eventually destroys several organs, including the kidneys, eyes, nerves, heart, and blood vessels. Diabetes can be classified into two types as - type-1 diabetes and type-2 diabetes.

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Pumpkin seed: Nutritional composition, health benefits

Kirti Patel, Apoorva Soni and Dr. Rajlakshmi Tripathi

Abstract
The *Cucurbita sp*. pumpkin seeds from the Cucurbitaceae family, although tiny, pumpkin seeds are incredibly rich in beneficial nutrients and nutraceuticals, including amino acids, phytosterols, unsaturated fatty acids, phenolic compounds, tocopherols, cucurbitacin's, and priceless minerals. A healthy existence and overall well-being depend on all of these bioactive substances. The goal of this review is to integrate the scientific data regarding the possible use of pumpkin seeds as an essential component of food and related biological systems, collected from electronic databases (Science Direct, Research Gate, PubMed, Scopus and Google Scholar) up to January 2020. They could be crucial for the food sectors because they are high in protein, fibers, minerals such as zinc, calcium, magnesium, manganese, cooper and sodium, PUFAs (polyunsaturated fatty acids), phytosterol, and vitamins. These necessary nutrients can be obtained from pumpkin seeds, which can also help with fatigue management, by include them in diet. According to several researches, it has widespread medical applications for antidiabetic, anti-hypertension, anticancer, immunomodulation, antibacterial, anti-hypercholesterolemia, intestinal anti-parasitic, and anti-inflammation (Joachim M, *et al.* 2020) [25]. Additionally, to having pharmacological properties as anti-diabetic, antifungal, antibacterial, anti-inflammation, and antioxidant benefits, pumpkin seeds are a good source of protein.

Keywords: Pumpkin seeds, antidiabetic, antidepressant, anticancer, anthelmintic

Introduction
Due to the significant nutraceutical and therapeutic potential of their bioactive components, pumpkin seeds have drawn increasing attention in recent years. The Cucurbitaceae family includes the vegetable crop known as the pumpkin. It contains such compounds which are rich in vitamin E (tocopherols), Tetracyclic triterpenes, squalene, carotenoids, pyrazine, saponins, triterpenoids, phytosterols, phenolic compounds, unsaturated fatty acid, flavonoids, proteins, fibers, polysaccharides, and minerals such as magnesium, potassium, phosphorus, calcium, sodium, iron, zinc, manganese and copper (Aamir H, *et al*., 2017, Joachim M. *et al.*, 2020) [44, 25]. The family has the highest proportion of edible plant species of any family in the plant kingdom. Large, non-endospermic, and typically dark red in color, the seeds are encased in a bright yellow fibrous endocarp. It is necessary to supplement staple foods with necessary minerals and vitamins that may not be present in staple diets. Compared to staple foods, they often generate more nutrients per unit of land surface. Oleic and linoleic acids make up the majority of the oil found in pumpkin seed, which is normally an extremely unsaturated oil. Since linolenic acid and other highly unsaturated fatty acids are present in very small amounts, pumpkin seed oil has good oxidative stability for storage or commercial uses and produces few free radicals when consumed by humans. Oleic and linoleic acid distribution patterns are not random, according to studies of pumpkin seed oil triacylglycerol positional isomers (Jakab A *et al.* 2003) [21]. Pumpkinseed oil is ideally suited for enhancing the nutritional value of meals due to its large percentage of unsaturated fatty acid makeup. Numerous health advantages have been attributed to pumpkin seed oil (Tsai YS, *et al.* 2002) [42]. Preventing prostate growth and shrinking its size is the most important health advantage associated with pumpkin seed oil (Gossell-Williams M, *et al.* 2006) [16]. Additionally, there is evidence to support the claims that pumpkin seed oil helps prevent the development of hypertension, reduce hypercholesterolemia, and treat arthritis (Fu C, *et al.* 2006) [15].
The lipid components of pumpkin seeds have been associated with decreased bladder and urethral pressure and enhanced bladder compliance. It has been discovered that pumpkin seed oil reduces diabetes by encouraging hypoglycemic activity.

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MANAGEMENT OF PLATELETS LEVEL WITH THE HELP OF PHYSICAL EXERCISES

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Abstract: Platelet management with physical exercise requires a cautious approach. Regular, moderate-intensity workouts can enhance platelet function by improving blood flow and reducing clotting risk. However, strenuous exercise can transiently lower platelet count, potentially increasing bleeding risk. Monitoring platelet levels is crucial, especially in those with underlying conditions. Maintaining hydration, balancing aerobic and strength training, and avoiding vigorous activity during low platelet counts are essential. Consult a healthcare expert for a personalized exercise regimen that prioritizes platelet health while promoting overall fitness.

Index Terms **– Platelets count, Stress reduction, relaxation techniques, blood cell.**

I. INTRODUCTION

Platelets, or thrombocytes, are small, colorless cell fragments in our blood that form clots and stop or prevent bleeding. Platelets are made in our bone marrow, the sponge-like tissue inside our bones. Bone marrow contains stem cells that develop into red blood cells, white blood cells, and platelets. Platelets were recognized as a distinct blood element in the late 19th century; the seminal work by bizzozero in 1882 demonstrated that platelets (and not white blood cells) were responsible for formation of "white" clots at the sites of vascular injury in guinea pig microvessels in vivo [BIZZOZERO J. , 1882]Platelets play an important role in the vessel. Following their formation from megakaryocytes, platelets exist in circulation for 5–7 days and primarily function as regulators of hemostasis and thrombosis. Following vascular insult or injury, platelets become activated in the blood resulting in adhesion to the exposed extracellular matrix underlying the endothelium, formation of a platelet plug, and finally formation and consolidation of a thrombus consisting of both a core and shell. This research paper on management of platelets with physical exercises regular physical training reduces CV death and rehospitalization in patients affected by coronary artery diseases (CAD) [*EUR. HEART J,2021, SHARMA S. ET AL,2021]*.

II. MAIN FUNCTIONS OF PLATELETS IN THE HUMAN BODY

1. **Hemostasis**: Platelets are essential for preventing excessive bleeding when a blood vessel is damaged. When a blood vessel is injured, platelets quickly adhere to the site of injury and form a temporary plug. This initial plug prevents further blood loss until more permanent clotting mechanisms can take over.[J.N. Thon, 2010]
2. **Coagulation**: Platelets release chemical signals that activate the coagulation (clotting) cascade. This cascade involves a series of enzymatic reactions that ultimately lead to the formation of a stable blood clot. Fibrin, a protein, forms a mesh that traps blood cells to create a more durable clot.
3. **Vasoconstriction**: Platelets release substances that cause the blood vessels to constrict or narrow at the site of injury. This constriction helps reduce blood flow to the injured area, further limiting blood loss.
4. **Inflammation and Immunity**: Platelets contain proteins and molecules that are involved in the body's immune response and inflammatory processes. They can release cytokines and chemokines, which help regulate immune responses and inflammation.[Sharda A., 2018]
5. **Wound Healing**: Platelets also contain growth factors that play a role in tissue repair and regeneration. They stimulate the healing of damaged tissues and blood vessels.[Kapoor S. et al, 2019]

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Bone Mineral Density and it's Association with Serum Calcium Level in Pre, Peri and Post Menopausal Women

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Abstract :- Osteoporosis is a "silent" disease where the bones become weak and easily prone to fractures. This problem continues to increase as the women ages and considered to be the most common during post menopausal stage. Present study look into the association of Calcium, with bone mineral density in pre, peri and post-menopausal women . Total 150 pre, peri and post - menopausal women ranges 30-60 years ,were randomly selected in a camp based approach in Jabalpur city. Socio demographic profile, anthropometric measurements, were obtained, whereas bone mineral density(T-score) were analysed by using of Qualitative ultrasound (QUS) Bone densitometer. Data were analysed by using SPSS 16 version for one way ANOVA and PEARSON correlation. The results demonstrated that majority (90%) of pre menopausal women belonged to the age group of 38-45 years, having mean age of 34.42±2.58 for pre, 42.8±1.67 for peri and 52.9±3.39 for post menopausal women. The mean scores of age, height, body mass index and serum calcium were found to be non significant(p>0.05), whereas the mean scores of weight were found to be significant at (p<0.05) , bone mineral density and serum calcium level were not correlated significantly. Therefore, a proper lifestyle modifications can be helpful to maintain a proper bone health of a women.

Keywords :- Osteoporosis, menopausal women, Qualitative ultrasound (QUS), calcium.

Introduction :- Osteoporosis is a disease were the bones become "porous" or weak. With an unexpected increase in the rate of elderly populations ,around one third of women will spend their life time in post menopausal stage(Partyńska-Marszewska & Partyński, 2021).Attainment of right peak bone mass is very essential for preventing osteoporosis and later fractures. W.H.O. criteria based on T-score were used to assess the bone mineral density. According to W.H.O. classification Normal >-1.0,Osteopenia <-1.0, >-2.5,Osteoporosis <-2.5,Severe Osteoporosis <-2.5 plus fragility fractures (Lu et al., 2001) Estrogen hormone is responsible to regulate the bone mass accumulations(Styrkarsdottir: - *Google Scholar*, n.d.), other factors like nutrition, exercise and smoking may also be responsible for having proper bone mass .Nearly 10%of bone is transform by continuous remodeling of healthy bones(Rongsur: *Google Scholar*, n.d.).Bone loss and bone resorption markers can be useful to classify menopausal women as fast bone losers(Gennero: - *Google Scholar*, n.d.) According to National Osteoporosis Foundation(NOF) approximately 9.1 million women are having osteoporosis and 38 million is with low bone mass (Nguyen: - *Google Scholar*, n.d.) Around 44% of lifetime risk of fracture has been estimated for 90 years old women which is double the risk for a men having same age(Cowthon: - *Google Scholar*, n.d.) Present manuscript aimed to find out the association between bone mineral density and serum calcium level in pre, peri and post -menopausal women.

Taking these points into considerations the following objectives and hypothesis has been formed-

a) To compare the mean score of age of women of different menopausal stages.
b) To compare the mean score of height of

2 Menopause: A hormone deficient state

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Menopause: A hormone deficient state

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Abstract
Menopause or climacteric is a natural process marked by the end of the reproductive cycle in human females. It generally occurs between the ages of 45 to 55 years. It can be natural or artificial, where ovaries have been removed by surgery. Due to a decline in the level of estrogen and progesterone levels and dysregulation of the Hypothalamic -Pituitary- Gonadal Axis, many short-term and long-term symptoms disturb the quality of life of women. The objective of this study is to review the basics of menopause, its prevalence, mechanism, stages, and symptoms through relevant sources. Menopause can be divided into four stages, and approximately 80% of women experience the symptoms (Vasomotor, Physical and Somatic, Phycological, and Sexual) in their transition period. Hence, there should be the need to create awareness or nutritional interventions that may help increase knowledge, about the stages of menopause, and also their behaviour which will improve their general health and well-being and decrease the risk of various metabolic diseases.

Keywords: Climacteric, ovaries, transition period, symptoms

Introduction
Menopause is not a disease or disorder as it is a normal part of aging, can be marked by the end of reproductive years or it can be defined as the permanent cessation of menstruation resulting from loss of ovarian follicular activity (WHO Definition of Menopause - Google Search, n.d.) or 12 consecutive months without menstrual cycle or can be defined as a period when menstrual cycle and ovulation stops as a result of which ovaries no longer releases an egg. Possible causes can be due to naturally declining reproductive hormones (Estrogen and progesterone), oophorectomy, chemotherapy, radiation therapy, or primary ovarian insufficiency. Due to insufficiency in reproductive hormone levels there increases the risk of various mid-life diseases and problems.

2. Prevalence
The prevalence of natural and surgical menopause were found to be 9.5% and 6.2% (Mozumdar, 2021) [18] and about 50 million cases annually (Massart F, 2001) [14] and by 2030 increased the projection of menopausal women would be 1.2 billion worldwide. (K, 1996). The Natural menopause age of Indian women was found to be 46.2± 4.9 years (Ahuja, 2016) [1]

Table 1: Mean natural age in different regions of India.

Region	Mean natural age of menopause
East	47.3±3.91
West	46.2±4.89
North	45.5±4.86
South	46.1±5.63
Center	47.8±4.41

Source: A pan India survey by IMS (Ahuja, 2016) [1]

Which is much less than in Western countries 51 years, moreover Indian women begin their Peri-menopausal stage by the age of 44.69±3.79 (Singh & Pradhan, 2014) [24]. Large number of illiterate women, poor nutritional status with early childbearing, low age at marriage could be the problem of early menopause in India. (Syamala & Sivakami, 2005) [25].

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"Who Needs a Hero? Redefining Female Agency in Jane Austen's Novels"

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ABSTRACT

Written as a way of introducing the exceptionally talented mind of Jane Austen, this article explores the broad array of geniuses that she embodies. The article traces the development of her voice over the course of her novels, focusing on character perspective and creation. Austen also switches between multiple narrative perspectives (omniscient and internal monologues), providing depth to her characters within a unified story. It seems to me that this approach highlights a shining example of Austen using her language and perspective as tools, establishing an understanding that she is not merely an observer or recorder of social comment, but a text weaver. Moreover, the novels of Austen reveal a singular blend of conventional literary structure and its opposition. And as her novels of social comedy provide subtle arguments with contemporary society, and although she respects traditional forms and customs Austen also questions much of the prevailing standards of the time akin to how she pits tradition against individual growth more and more as becomes noticeable in each successive novel. This act of placing women, bold for the era given gender roles at the time, at the forefront of her narratives ensured Austen's place as a literary giantess and an early figurehead for the feminist novel. Excerpts from Austen's works, supplemented with scholarly arguments, illustrate the complexity of her narrative method and thematic investigations during the analysis. Overall, this paper contributes to the landscape of Austen adaptation as well as illuminates Austen's long-lasting ability to tell stories through English prose, all contributing to the trajectory of the novel.

Keywords: *Jane Austen, narrative technique, characterization, point of view, convention and innovation, social commentary, feminist literature, literary rebel, interior disclosure, chameleon-like style, irony, dialogue.*

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A Case Study of the Narmada River Biota

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ABSTRACT

One of India's main hotspots for aquabiodiversity is the Narmada River Valley. Plankton, macrozoobenthos, fungus, and fish make up the diverse comparative description of aquatic fauna that is the subject of the current study. The overall biodiversity along the river course has drastically decreased due to climatic changes, inadequate preservation efforts, and unchecked human influence. The extermination of animal populations and the ensuing ecological stigma will likely force nearby and far-off humans to make compromises with the economically significant production of the same natural resource. It is necessary to reconsider the current approach to the sustainable use of plant and animal resources while upholding the goal of maintaining human welfare.

Key words : *Diversity, fungi, Phytoplankton, Narmada river, Zooplankton,*

INTRODUCTION

India is one of the mega biodiversity country in the world, among all countries it is in ninth position in terms of mega biodibersity (Mettemeier *et al.,* 1997). River Narmada originates from very peculiar mountain ranges of Amarkantak of Shahdol district in Madhya Pradesh and covers a distance of 1312 km before entering the Gulf of Khambhat through Gujarat State. It is one of the most important aquatic resources in Madhya Pradesh as well as an important ecological hub of central India hence known as epicentre for diversities study. It shows a wide range of biodiversity of plankton, macroinvertebrates, pisces and fungi being good indicator of environmental stress. The studies on biological aspects of ecosystem are important in environmental impact assessment in view of the conservation of environmental stability, quality and safety of natural flora & fauna.

FUNGI

Fungi are eukaryotic, heterotrophic organisms, including both single-celled yeasts and multi-cellular filamentous fungi. Many fungal species can survive in oligotrophic environments. Some fungal species or their metabolites are human pathogens or allergens. Upadhyay *et al.,* (2012) have reported Biodiversity of water borne conidial fungi in river Narmada, the dominant water borne conidial fungi *Lunulospora curvula* and *Triscelephorus monosporus* were found in abundance and 90% of fungi were found in leaves. Total of 35 fungi were recorded form foam, leaves, and twig analysis. Singh *et al.,* (2014) had studied & analysed that Biological Study to Asses Health of Narmada River in Jabalpur, 30 water borne fungi were recorded. Therefore, the present investigation that indicates water of the river Narmada is less polluted.

ZOOPLANKTON

Planktons are minute organisms and are essential links in food chain in aquatic system. The river Narmada is one among the important rivers in India with varied rich biodiversity (Sharma *et al.,* 2013). Planktons are the main source of energy and contain high nutritive value (Mishra and Joshi 2003). Plankton population and their distribution are greatly affected by physical and chemical properties of water (Sharma and Diwan, 1997). Kumari *et al.,* (2014) reported 45 genera of phytoplankton which comprised, 21 genera belonged to *Chlorophyceae*, 14 to *Bacillariophyceae* and 10 to *Cyanophyceae*. Sharma *et al.,* (2013) stated 39 species of zooplankton. As far the qualitative (species wise) abundance is concerned, 8 species belonging of Phyla protozoa, 15 species of Rotifera, 9 species of Cladocera and 7 species belonging to Copepoda.

BENTHIC MACROINVERTEBRATES

Benthic macroinvertebrates are important and dynamic part for riverine ecology. The benthic macroinvertebrates are most commonly used as biological indicators (Resh and Jackson, 1993; Kay *et al*., 1999; Smith *et al*., 1999). Sharma

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POTENTIAL APPLICATIONS OF PEROXIDASES

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ABSTRACT

Peroxidase is a heme or iron-porphyrin protein that belongs to a broad family of enzymes known as oxidoreductases. Their primary purpose is to oxidize molecules while reducing hydrogen peroxide levels. They are widely dispersed in living creatures and typically produce spectacular colour products as a result of their catalytic activity. They often catalyze various oxygen transfer processes that use hydrogen peroxide or any of the other peroxides as electron acceptors and substrates. This ability to reduce peroxides at the expense of electron-donating substrates distinguishes peroxidases as ubiquitous and very essential enzymes with several biotechnological uses. Not unexpectedly, peroxidases have a wide range of activities in biotechnology. Among others, these include such diverse areas as bioenergy, bioremediation, dye decolorization, humic acid degradation, paper and pulp and textile industries among many others. An important reason for this ability is the different areas from which peroxidases could be sourced as the function of many peroxidases show variations according to its source. This is a character that differentiates peroxidases from many other biological catalysts. Among the many different types of peroxidases are the heme peroxidases which mainly come from plants and fungi and include among others lignin peroxidases, manganese peroxidases and versatile peroxidases. Some important types of peroxidases from humans and animals are glutathione peroxidase, thyroid peroxidase, lactoperoxidase, salivary peroxidase and thyroid peroxidase. Bioenergy, bioremediation, dye decolorization, humic acid degradation, the paper and pulp, and textile industries are just a few examples. An key explanation for this ability is the variety of places from which peroxidases can be obtained, as the function of many peroxidases varies depending on their source. This characteristic distinguishes peroxidases from many other biological catalysts. The heme peroxidases, which are mostly found in plants and fungi, comprise lignin peroxidases, manganese peroxidases, and versatile peroxidases. Human and animal peroxidases include glutathione peroxidase, thyroid peroxidase, lactoperoxidase, salivary peroxidase, and thyroid peroxidase.

HISTORY : Peroxidase has a long history that spans ages and civilizations. As early as 1500, a product that led to the development of peroxidase was discovered or "gifted" to Europe: guaiacum, which were essentially chips from the Caribbean plants G. santum and G. officinale that cured syphilis when added to water in a steam bath. Although that therapy only lasted about two centuries, by the end, a guaiacum ingredient, guaiacol, had become a trusted bacteriostatic (tuberculostatic) agent as well as cough cure. However, the most reliable application for guaiacum or guaiacol is the test for occult blood in feces, which is a peroxidative reaction [2].

However, the genuine study of peroxidases dates back to the eighteenth century, when researchers began investigating diverse plant and animal tissues using various chemical substances whose color qualities alter as their oxidation states change [3]. Schonbein's 1855 research on the ability of diverse plant and animal tissues to oxidize guaiac implied the presence of peroxidase activity. The oxidation of guaiac by pus was then reported by Klebs in 1868 and Struve four years later in 1872 [2, 4]. Various other works followed these initial ones, including those of Felix Hoppe-Seyler in the 1883 as well as Paul Ehrlich in 1885; Rohmann and Spitzer in 1895, Spitzer alone in 1897,

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Assessment of Knowledge, attitude and practice of Osteoporosis among middle- aged women of Jabalpur city, M.P.

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ABSTRACT

Osteoporosis is characterized by a loss in bone mass and mineral density as well as changes in the composition or structure of bones. Osteoporosis fractures are becoming more common, and the general public's ignorance of the condition contributes to their ongoing burden on the healthcare system and the general population. Knowledge, Attitude, and Practices (KAP) is a quantitative approach that facilitates access to both qualitative and quantitative data. Awareness of osteoporosis may play a role in determining preventive actions. A combination of low literacy rates, ignorance of disease implications ,risk factors, and other variables contribute to a higher incidence of this treatable illness. The purpose of the study is to assess knowledge, attitude and practice of Osteoporosis among middle- aged women of Jabalpur city ,M.P. The data was collected from 100 middle -aged women (40 to 60 yrs.),from Jabalpur urban area,Ranjhi, through convenient sampling method. A standardized, pre-coded questionnaire was used in order to assess the knowledge, attitude, and practice (KAP) among respondents regarding osteoporosis. Results shows majority 35% of women belongs to the age group between 40-45yrs, greater number(55%) of them were housewife. The KAP scores of 69% of the women were average, followed by 17% with good scores, 10% with poor scores, and just 4% with received an excellent score. The result shows the significant association of KAP with age and occupation of respondents as $p<0.05$, whereas non-significant $p>0.05$ between KAP and socioeconomic status, occupation and telmedia. Data were analysed by using MS Excel,2019 for calculating percentage, frequency and chi-square at $p<0.05$ value of significance. Hence,this study demonstrated an acceptable degree of osteoporosis knowledge, attitude, and practice. A few of the KAP items received low scores. In order to appropriately address these items that were ranked below average, it has been crucial to develop educational programs.

KEYWORDS : *Knowledge, Attitude, Practice, Osteoporosis*

INTRODUCTION

Osteoporosis, a prevalent condition that is characterized by a systemic deterioration of bone mass and microarchitecture. (Rachner et al., 2011). It is a disorder of "porous bone,"which is characterized by a thinned-out bone structure that makes fractures possible from even minor falls or hits against furniture or car doors (Azizieh, 2015). It often occurs silently and without symptoms and is a major source of morbidity and death (Jahan, 2015). Over 8.9 million bone fractures are caused by osteoporosis each year worldwide; an osteoporosis fracture happens roughly every three seconds (Chinoy, 2019). Osteoporosis affects around 6.3% of adults over 50 and 21.2% of women in the same age range worldwide, according to the WHO (Yoshimura, et al, 2017). In all, 61% of osteoporosis fractures occur in women, with a female-to-male ratio of 1.6. Women also contribute for 80%, 75%, 70%, and 58% of arm, humerus, hip, and spine cracks (Harvey, 2018). Bone fractures exceed bone growth after the age of fifty, and osteoporosis often increases, particularly following menopause. Women are more susceptible to fracture (osteoporosis) and low bone density (osteopenia) due to the fact that their bones have historically been smaller and less dense than men's (Natesan & Kim, 2022). A person's acquaintance with someone or something is known as knowledge, and it can include facts, information, descriptions, or abilities learned via education or experience.An expression of support or disapproval for a person, location, object, or occasion is called an attitude. Attitude can also relate to the different idea of mood whereas practice is the process of repeatedly performing an

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NUTRITIONAL STATUS AND FOOD HABITS OF POSTMENOPAUSAL WOMEN OF JABALPUR CITY, M.P., INDIA

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ABSTRACT
Menopause is a natural shift that every woman goes through. It is a period of transition in women's lives during which they experience several physiological changes. The vulnerability to several chronic ailments, such as diabetes, cardiovascular disease, respiratory problems, liver disease, bone disorder, etc., increases during this period. Women's health condition is significantly influenced by food and other lifestyle factors. The current study set out to examine thenutritional status and dietary habits and of postmenopausal women, along with their health problems. The research was conducted in a camp based approach in the Jabalpur city of M.P. Using a purposive sampling, one hundred postmenopausal women between 40 to 55 yrs. were selected for the study. A self-structured questionnaire was used to gather the respondents' information, and the 24-hour recall method was used to record the individuals' nutrient intake. The mean age of the postmenopausal women was found to be 47.2 ± 2.1,whereas and median age were found to be 46yrs.Results showed non- significant association between socioeconomic status and physical activity with the age of menopause ($p > 0.05$), whereas a significant ($p < 0.05$) association was observed between educational qualifications and menopausal age. Majority(42%) of women were overweight, while (33%) were found to have normal BMI.Since the respondents' actual mean food and nutrient intake exceeded the recommended daily allowance, it is possible that this was caused by their socioeconomic position and eating habits.Hence ,for menopausal womenfrequent exercise, health monitoring, and dietary education are therefore crucial for preventing further health issues.

Keywords : Menopause, Physiological changes, Dietary habits.

OBJECTIVES

1 To assess the sociodemographic profile of postmenopausal women.
2 To assess the Body mass index(BMI) of postmenopausal women.
3 To assess the food and nutrient intake of postmenopausal women.
4 To assess the health-related problems of postmenopausal women.

INTRODUCTION

Menopause, a stage characterized by an irreversible end of the menstrual cycle, is one of the most difficult times in a woman's life. It typically manifests in people between the ages of 45 and 55. The ovaries' follicular activity is lost at this time, and this is accompanied by a shift in hormone levels that lowers the levels of progesterone and estrogen.. Recent advancements in the medical sciences have led to an increase in life expectancy. The majority of women today live longer than one-third of their lives beyond menopause(Mohammadalizadeh Charandabi et al., 2015). The female body's basal metabolism dramatically lowers with the onset of menopause and the absence of estrogen(Poehlman,2002). Obesity is becoming more commonplace every year; from 1975 to 2016, the prevalence of obesity nearly tripled. According to WHO statistics from 2016, 40% of women are obese(Obesity and Overweight, n.d.) The body mass index, is the simplest method to assess nutritional health. It is calculated as body weight in kilograms divided by height in meters squared(Musa,2022) Micronutrient deficit is more likely in diets with an energy content of less than 1200 kcal/day. Gallstones are common in the case of a very low-calorie diet (VLCD, < 800 kcal/day), and relapses can be found in 45.6% of patients following a year on low-energy diets (Erdélyi et al., 2024). Menopause may increase the chance of developing a number of chronic illnesses, including diabetes, hypertension, obesity, coronary artery disease, stroke, and other mental health conditions (Aggarwal et al.,

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Indian Traditional Knowledge in Medicinal Plant

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Introduction

Traditional knowledge of medicinal plants has been an integral part of Indian culture and civilization for thousands of years. The use of plants for medicinal purposes has been documented in various ancient texts, including the Ayurveda, Unani, and Siddha systems of medicine. These traditional systems of medicine are based on the concept of "Tridosha" which refers to the three fundamental principles of the human body - Vata, Pitta, and Kapha.

The Ayurveda system of medicine, which is one of the oldest and most widely practiced systems of medicine in India, is based on the concept of "Ayurveda" which means "the science of life". It is based on the idea that the human body is composed of five elements - earth, water, fire, air, and ether - and that health is maintained by the balance of these elements. The Ayurveda system of medicine uses a variety of plant-based medicines, including herbs, spices, and other plant materials, to treat various diseases and disorders.

Key words: Medicinal Plants, Ayurveda system of medicine

The Unani system of medicine, which is also widely practiced in India, is based on the concept of "Hunain" which means "human". It is based on the idea that the human body is composed of four humors - blood, phlegm, yellow bile, and black bile - and that health is maintained by the balance of these humors. The Unani system of medicine uses a variety of plant-based medicines to treat various diseases and disorders.

The Siddha system of medicine, which is practiced mainly in southern India, is based on the concept of "Siddha" which means "attained". It is based on the idea that the human body is composed of three doshas - vata, pitta, and kapha - and that health is maintained by the balance of these doshas. The Siddha system of medicine uses a variety of plant-based medicines to treat various diseases and disorders.

Indian traditional knowledge in medicinal plants has been extensively documented in various ancient texts, including the Ayurveda text "Charaka Samhita", the Unani text "Hunain's Canon", and the Siddha text "Sidha Samhita". These texts describe the use of over 500 plant species for medicinal purposes.

Some examples of Indian traditional knowledge in medicinal plants include:

Turmeric (Curcuma longa) - used to treat various diseases such as arthritis, asthma, and skin disorders.

Ginger (Zingiber officinale) - used to treat digestive disorders such as nausea and diarrhea.

Neem (Azadirachta indica) - used to treat various diseases such as malaria, fever, and skin disorders.

Tulsi (Ocimum sanctum) - used to treat various diseases such as coughs, colds, and fever.

Ashwagandha (Withania somnifera) - used to treat stress-related disorders such as anxiety and depression.

The Indian traditional knowledge in medicinal plants has been extensively validated through scientific studies. For example, turmeric has been shown to have anti-inflammatory properties and has been used to treat various diseases such as arthritis. Ginger has been shown to have anti-inflammatory properties and has been used to treat digestive disorders.

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ज्ञान का मतलब है शिक्षा और शिक्षा के बिना मनुष्य पशु के समान है। भारतीय ज्ञान परम्परा अक्षुण्ण है इस परम्परा पर अनेक घात हुये परन्तु यह कभी अविचल नहीं हुआ, अनादि काल से जैसे था अब भी वैसे ही है। भारत एक देश नहीं बल्कि ज्ञान, संस्कार, आदर्श की कर्मभूमि है। यहां कई ऋषि मुनि हुए हैं जिन्होने अपने ज्ञान कौशल से वेद, उपनिषद, पुराण आदि अनेक विद्याओं का परम्परागत से अब तक जीवित रखा है। इस भारतवर्ष में उत्पन्न सभी ऋषि मुनियों से समग्र विश्व ज्ञान चरित्र की शिक्षा लेती है क्योंकि यह समग्र विश्व का मार्गदर्शक तथा विश्वगुरु है। भारतीय ज्ञान परम्परा में शोध का का अहम भूमिका है। जितने भी ऋषि मुनि हुये वे अपने ज्ञानार्जन शोध और तपस्या के बल पर ही अर्जन कर पाये हैं। जिस प्रकार अनाभ्यासे विषं विद्या है उसी प्रकार बिना शोध और परख के विद्याज्ञान निष्फल है। इसलिए इस समय से नहीं बल्कि अनादि काल से यह ज्ञान परम्परा में शोध महत्वपूर्ण भूमिका रही है। भारतीय ज्ञान परम्परा दीर्घ अनेक वर्षों से चली आरही है, या सृष्टि के आरम्भ से ही चली आरही है ऐसा कहना भी अत्योक्ति नहीं होगी। ऐसा नहीं है कि प्राचीन ऋषि मुनि लोग कोई कार्य बिना सोचे समझे किया करते थे, अपितु आज के शोधकार्यों से कई गुणा बेहतर थे। चाहे आयुर्वेद के क्षेत्र में हो या विज्ञान के क्षेत्र में हो। परिवर्तनशील संसार में सभी बदलते हैं और इसका शिकार हम हुए हैं। उतरोत्तर पद्धतियां बदलती गई और हम पुनः अवनत होते गए। भारत में अंग्रेजों के आने के बाद शिक्षा के क्षेत्र में अनेक बदलाव हुए हैं, उनमें से शोध भी है। हलांकि पाचीन काल में ऋषि मुनियों के शोध पद्धति रही है वैसा आज हमें देखने को कम मिलता है। भारतीय ज्ञान परम्परा में शोध एक निहित तत्व है। इसमें कोई कार्य ऐसा नहीं होगा जिसमें कि बिना जांचे परखे किया जाए। प्राचीन सहित्यों में अनेक ऐसे तथ्य मिलते हैं जो कि शोधपरक होने की पुष्टि है।

भारतीय ज्ञान परंपरा - मूल्यपरक शिक्षा का आधार

व्यास, पाणिनि, पतंजलि, वाल्मीकि कौटिल्य, वात्स्यायन, भरतमुनि, चरक, कालिदास, भृर्तहरि, भवभूति, सुश्रुत, आर्यभट्ट, वराहमिहिर, शंकराचार्य, रामानुजाचार्य, बल्लभाचार्य, रामानंद, कबीर, सूर, तुलसी, रामकृष्ण परमहंस, स्वामी विवेकानंद जैसे विद्वानों के योगदान का अध्ययन हमें यह एहसास कराता है कि ज्ञान के क्षेत्र में भारत ने दुनिया को बहुत कुछ दिया है। मैथिलीशरण गुप्त के शब्दों में "संसार को पहले हमीं ने ज्ञान भिक्षा दान की, आचार की, व्यवहार की, व्यापार की, विज्ञान की। भारतीय ज्ञान परंपरा में ऐसी मूल्यपरक शिक्षा पर जोर दिया गया है जिसमें नैतिक, आध्यात्मिक, सामाजिक, सांस्कृतिक मूल्यों के साथ मनुष्य का सर्वांगीण विकास हो सके।

1835 में जब अंग्रेजी शिक्षा अधिनियम लागू हुआ था उसके लगभग 185 वर्ष बाद 2020 में आई 'राष्ट्रीय शिक्षा नीति ऐसा पहला महत्वपूर्ण प्रयास है, जिसमें वर्षों से उपेक्षित भारतीय भाषाओं एवं भारतीय दर्शन को नये सिरे से सहेजने की कोशिश की गई है। इस दुर्भाग्यपूर्ण घटनाक्रम का एक दुखद पहलू यह है कि इन 185 वर्षों में 73 वर्ष स्वतंत्रता के बाद के हैं। स्वतंत्रता के आन्दोलन में अपनी जान न्योछावर करने वालों ने शायद सपने में भी नहीं सोचा होगा कि जिनके हाथों में वे देश सौंपने जा रहे हैं वे इतने वर्षों तक अंग्रेजियत के बोझ तले दबे रहेंगे। वेद, उपनिषद, पुराण, महाकाव्य - जिनमें रामायण और महाभारत प्रमुख हैं, भगवद्गीता आदि ग्रन्थों का गहन अध्ययन हमें यह समझने में मदद करता है कि भारतीय दर्शन एवं भारतीय ज्ञान परंपरा 'वसुधैव कुटुम्बकम्' विचाराधारा पर ही आधारित है। प्रकृति और मनुष्य के संबंधों में सकारात्मक सामंजस्य रखते हुए सतत् विकास (सस्टेनेबल डेवलपमेन्ट) करना भारतीय दर्शन की मूल विशेषता रही

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Various References to Indian Knowledge Tradition
भारतीय ज्ञान परंपरा के विविध संदर्भ

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INDIAN KNOWLEDGE TRADITION & SYSTEM : AN OVERVIEW

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India is not only a historic country but also a cremation ground. All the Rishi Munis took birth in India. If we talk about knowledge tradition, then the first word comes to our mind is 'Veda'. And if the researcher wants to know about the history, then he quotes Vedas. Scholars of Indian scriptures have come into its grip and started to interpret Sanatan scriptures. Vedas include social order, policy, etc. The knowledge tradition has its own characteristics, its place of learning, its texts, and their classification. India has always been known about the knowledge tradition and a knowledge culture. Ancient civilizations are accepting India's debt in the field of knowledge. If we talk of knowledge, it is based on language, philosophy, inescapability of knowledge, folk, Sculptures. In India, there has been an unbroken series of Acharyas, Rishis, Granthas, etc., and teaching and learning took place through gurukul system. Students learnt about Vedas, Vedangas, Smiritis and Stutis. Education was imparted orally. There was a guru–shishya tradition. From the Vedic period, the knowledge tradition was high. Be it Taxila, Nalanda or Vikramshila University. But now this is more westward tilt. Indians are getting knowledge but just to get jobs in sake of earning money. But they are losing their culture, tradition, custom and ethic. So today, there is a need to find the treasure of this knowledge hidden in ancient text to groom it and use it for human welfare. There is need to research on these texts and let India to be connected to its origin.

The Indian knowledge system attempts to support and facilitate more research to address present societal concerns. IKS is founded on Vedic literature, specifically the Vedas and Upanishads. Existing IKS courses can be synchronized with digital learning systems. Modules for educator training and orientation may be developed to increase the quality of classroom delivery in IKS courses. Specialized teacher training centers will be established to educate teachers on specific themes linked to Indian Knowledge Systems. Innovation will be encouraged in IKS through Grand National Challenges, National Competitions, Hackathons, and incentives. Institutions can leverage worldwide cooperation through organizations like the Indian Council of Historical Research (ICHR) to perform India-centric research. Initial seed financing will be offered for the creation of IKS Centers in various higher education institutions. There will be an outreach to the public through various means to distribute and popularize true IKS knowledge in order to produce informed and confident citizens. People will participate in a variety of IKS efforts through Jan Bhagidari programs, which are akin to citizen science initiatives. Skill-based programs will offer job prospects for children. IKS will promote heritage technology by providing technology solutions for showcasing Indian heritage to Indians and the rest of the world.

The Indian knowledge system attempts to encourage and facilitate additional research to address

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जिला मंडल में मध्याह्न भोजन द्वारा सम्पूरित स्कूल जाने वाली लड़कियों की पोषण स्थिति का अध्ययन

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सार

अधिक लड़कियों के नामांकन और अधिक लड़कियों की नियमित उपस्थिति के संबंध में स्कूल भागीदारी पर मध्याह्न भोजन का महत्वपूर्ण प्रभाव पडता है। अधिकतर बच्चे खाली पेट स्कूल पहुंचते हैं। जो बच्चे स्कूल आने से पहले भोजन करते हैं उन्हें भी दोपहर तक भूख लग आती है और वे अपना ध्यान केन्द्रित नहीं कर पाते हैं। मध्याह्न भोजन लड़कियोंके लिए "पूरक पोषण" के स्रोत और उनके स्वस्थ विकास के रूप में भी कार्य कर सकता है। यह समतावादी मूल्यों के प्रसार में भी सहायता कर सकता है क्योंकि कक्षा में विभिन्न सामाजिक पृष्ठभूमि वाले बच्चे साथ में बैठते हैं और साथ-साथ खाना खाते हैं। विशेष रूप से मध्याह्न भोजन स्कूल में लड़कियोंके मध्य जाति व वर्ग के अवरोध को मिटाने में सहायता कर सकता है। स्कूल की भागीदारी में लैंगिक अंतराल को भी यह कार्यक्रम कम कर सकता है क्योंकि यह बालिकाओं को स्कूल जाने से रोकने वाले अवरोधों को समाप्त करने में भी सहायता करता है। मध्याह्न भोजन स्कीमलड़कियोंके ज्ञानात्मक, भावात्मक और सामाजिक विकास में मदद करती है। सुनियोजित मध्याह्न भोजन को लड़कियोंमें विभिन्न अच्छी आदते डालने के अवसर के रूप में उपयोग में लाया जा सकता है। यह स्कीम महिलाओं को रोजगार के उपयोगी स्रोत भी प्रदान करती है।

मध्याह्न भोजन स्कीम देश के 2408 ब्लॉकों में एक केन्द्रीय प्रायोजित स्कीम के रूप में 15 अगस्त, 1995 को आरंभ की गई थी। वर्ष 1997-98 तक यह कार्यक्रम देश के सभी ब्लाकों में आरंभ कर दिया गया। वर्ष 2003 में इसका विस्तार शिक्षा गारंटी केन्द्रों और वैकल्पिक व नवाचारी शिक्षा केन्द्रों में पढने वाले लड़कियोंतक कर दिया गया। अक्तूबर, 2007 से इसका देश के शैक्षणिक रूप से पिछड़े 3479 ब्लाकों में कक्षा VI से VIII में पढने वाले लड़कियोंतक विस्तार कर दिया गया है। वर्ष 2008-09 से यह कार्यक्रम देश के सभी क्षेत्रों में उच्च प्राथमिक स्तर पर पढने वाले सभी लड़कियोंके लिए कर दिया गया है। राष्ट्रीय बाल श्रम परियोजना विद्यालयों को भी प्रारंभिक स्तर पर मध्याह्न भोजन योजना के अंतर्गत 01.04.2010 से शामिल किया गया है।

कार्यक्रम के उद्देश्य

इस स्कीम के लक्ष्य भारत में अधिकांश लड़कियोंकी दो मुख्य समस्याओं अर्थात् भूख और शिक्षा का इस प्रकार समाधान करना है:-

1. सरकारी स्थानीय निकाय और सरकारी सहायता प्राप्त स्कूल और ईजीएस व एआईई केन्द्रों तथा सर्व शिक्षा अभियान के तहत सहायता प्राप्त मदरसों एवं मकतबों में कक्षा I से VIII के लड़कियोंके पोषण स्तर में सुधार करना
2. लाभवंचित वर्गों के गरीब लड़कियोंको नियमित रूप से स्कूल आने और कक्षा के कार्यकलापों पर ध्यान केन्द्रित करने में सहायता करना, और
3. ग्रीष्मावकाश के दौरान अकाल-पीडित क्षेत्रों में प्रारंभिक स्तर के लड़कियोंको पोषण सम्बन्धी सहायता प्रदान करना।

परिचय

केन्द्रीय सहायता के संघटक

इस समय मध्याह्न भोजन स्कीम राज्य सरकारों/संघ राज्य क्षेत्र प्रशासनों को निम्नलिखित के लिए सहायता प्रदान करती है:-

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Mobile Learning and Digital Technology : Revolutionizing Education

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Introduction :- The advent of mobile learning and digital technology has fundamentally transformed the landscape of education. As smartphones, tablets, and other mobile devices become increasingly ubiquitous, they offer unprecedented opportunities for learning that transcend the traditional classroom setting. Mobile learning (m-learning) leverages these technologies to provide flexible, personalized, and accessible educational experiences. This essay explores the various dimensions of mobile learning and digital technology, highlighting their benefits, challenges, and future prospects in the realm of education.

The Rise of Mobile Learning :- Mobile learning refers to the use of mobile devices to facilitate learning anytime and anywhere. This mode of learning capitalizes on the portability and connectivity of mobile devices to deliver educational content, support collaboration, and enhance engagement.

Accessibility and Flexibility :- One of the primary advantages of mobile learning is its accessibility. Learners can access educational resources regardless of their geographical location, making it particularly beneficial for individuals in remote or underserved areas. Additionally, the flexibility of mobile learning allows students to learn at their own pace and schedule, accommodating diverse learning styles and life commitments.

Personalized Learning :- Mobile learning enables personalized learning experiences through adaptive learning technologies. These technologies use data analytics to tailor educational content to individual learning needs, preferences, and progress. As a result, learners receive targeted support and resources that enhance their understanding and retention of material.

Engagement and Interactivity :- Mobile learning incorporates interactive elements such as quizzes, simulations, and games, which can significantly increase student engagement. The interactive nature of mobile apps fosters active learning, encouraging students to participate and apply their knowledge in practical contexts.

Digital Technology in Education :- Digital technology encompasses a wide range of tools and platforms that facilitate learning and teaching. These technologies include e-books, learning management systems (LMS), virtual classrooms, and educational apps, all of which contribute to a more dynamic and effective learning environment.

E-books and Digital Resources :- E-books and digital resources provide an extensive array of educational materials that are easily accessible and often more affordable than traditional textbooks. These resources can be updated regularly to reflect the latest information and research, ensuring that learners have access to current knowledge.

Learning Management Systems (LMS) :- LMS platforms such as Moodle, Blackboard, and Canvas offer comprehensive solutions for managing and delivering online courses. These systems support a range of functions, including content delivery, assessment, communication, and tracking student progress. LMS platforms are integral to blended and online learning models, providing a structured and efficient framework for education.

Virtual Classrooms and Collaboration Tools :- Virtual classrooms and collaboration tools enable real-time interaction between students and instructors, simulating the experience of a traditional classroom. Platforms like Zoom, Microsoft Teams, and Google Classroom facilitate

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Removal of m-chlorophenol from Wastewater by Adsorption onto Flyash Produced from Thermal power plant: Kinetic Modeling Studies

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ABSTRACT

Adsorption technique is widely used for removal of toxic organics from aqueous solutions. As commercial activated carbon is an efficient adsorbent, it's widespread used is restricted due to its high cost and substantial lost during regeneration. The aim of this study is to investigate the possibility of flyash (FA) as an alternative adsorbent for phenols removal from aqueous solution .The removal characteristics of m-chlorophenol (MCP) from aqueous solution by flyash is investigated under various conditions of contact time, particle size, pH, concentration and temperature. The level of uptake of m-chlorophenol by flyash decreased with increasing particle size and pH but increases with temperature. Rate constants for different conditions are evaluated using first-order kinetics. The experimental results underlined the potential of flyash for removal of m-chlorophenol from wastewater. The main mechanisms involved in the removal of m-chlorophenol from solution by flyash are electron –withdrawing effect of chloro group of benzene ring and adsorption at the surface of the flyash. It is found that these low cost flyash adsorbent demonstrated good removal capability of phenols and hence can be used economically on large scale for m-chlorophenol.

Key Words: Flyash, m -chlorophenol, adsorption, kinetics, mechanism.

INTRODUCTION

Wastewater congaing phenolic compounds are a serious environmental problem releasing into the environment without treatment. The toxic and hazardous nature of phenol and its derivatives have been well documented and can cause several health problems.[1] it is of major concern that organic pollutants are present in the environment because of their toxicity, bio-accumulative tendency, and threat to human life and the environment. Phenolic compounds have been classified as high priority pollutants by EPA (Environmental Protection Agency) of USA. The Ministry of Environment and forest (MOEF), Government of India and EPA of USA have listed phenols on the priority pollutants list. Chronic toxic effects due to phenols reported in humans including vomiting, difficulty in swallowing, anorexia, liver and kidney damage, headache, fainting and other mental disturbances and excretion of dark urine .[2-3]scientists for the conversion of fly ash into beneficial products while probing doable avenues for allure tenable utilization. Wastewater remediation utilizing Fly ash is one aforementioned attempt solving two together waste administration and water quality issues. Phenols are generated from industrial sources, such as refineries, petrochemical, pharmaceuticals and plastic resin production. Phenols are not only toxic but also carcinogenic in nature[4-5].Phenols have high stability in the aqueous phase and thus causes serious risk to the aqueous environment. Also it is detrimental to human health due to rapid absorption through the skin.[6-8] Phenols have attached much public attention due to its presence in ground water, river and drinking waters. Even in low concentration, Phenols causes toxicity and foul odor to the water.

This is due to its reactivity with chlorine (-Cl) and nitro (-No $_2$) group present in the soil to from chlorophenol and nitro phenol respectively.[9] Most countries specify maximum allowable concentration of phenol in wastewater to be less than 1ppb.[10] The exposure of phenol and its derivative compounds to human and animal causes liver and kidney damage, central nervous system impairment, diarrhea and excretion dark urging.[11-12] This makes it necessary to develop methods that allow one to detect quantity and remove phenol from wastewater. [13]Several conventional methods are available for treating phenolic wastewater which include reverse osmosis, anaerobic processes, the electro Fenton method, combined application of flotation and conjugation process, stripping and oxidation, solver extraction etc.[14] Each of these methods has some disadvantages in their application. Among various methods used in phenol wastewater treatment, 'adsorption'

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Instrumental characterization of Soil by , XRD,XRF and FTIR

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Abstract
Instrumental characterizations of the soil were performed by different techniques such as XRF, XRD and FTIR,SEM,BET. XRF shows the chemical compositions of the soil where Al-oxide and silica oxide are present in major quantity whereas XRD confirms the presence of these minerals in. FTIR studies show the presence of quartz, alumina, haematite and different mineral matters.
Keywords. Instrumental characterization; SEM, BET XRF; XRD; FTIR,

1. Introduction

The soil deposit has many important uses including floor tiles and brick making. When soil is dried in the sun it can be used to produce bricks, utilized in the construction of mud houses, and when combined with sand, it could be used as molds, which are used for casting projects [1]. Various researches have been conducted on soil mineral analysis. These researches revealed the presence of a wide spectrum of minerals [2] [3]. Furthermore, other analyses [4] have revealed, in general, the presence by analyzing clay samples using XRD, XRF, SEM. Soil materials consist of alumina, silica, water as well as some quantities of iron and alkaline earth metals. Generally, soil minerals bond is formed by both the tetrahedral sheets which are linked together through the sharing of the apical oxygen atoms. Some research works done on clay using the Scanning Electron Microscope (SEM) have revealed that it obtains much power of magnification than the standard visible light microscope. This is because the electrons are associated with a very short wavelength than the light wave, while the X-ray Diffraction analysis on soil was duly corrected by appropriate factors accounting for the variation of scattering due to their various angles. This study aims to characterize as well as to critically investigate the nature of the soil from the study area.

2. Experimental

Soil characterization is performed with a number of experimental approaches to investigate all relevant features. Soil is obtained from the land of Balaghat in the Lohara district of Madhya Pradesh. The sample is then divided into different fractions of

different particle sizes using a standard by sieve of lattice size having a geometric mean particle diameter of 0.75 mm. After that, the 0.75 mm fraction of the sample was divided, providing samples for XRF, XRD, and SEM analysis. The chemical constituents and LOI at 800 °C were determined by the Indian Standard Method (Indian Standard Methods of Chemical Analysis of Fireclay and Refractory Materials 1960). Potassium bromide in pellet form in the range of 450–4000 cm was analyzed for vibration spectra of soils with the aid of Fourier transform infrared spectroscopy using a Perkin Elmer 1800 model instrument.

3. Results and discussion

3.1 Characterization of soil particle

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BIOLOGICAL ACTIVITY AND MEDICINAL USES OF CARICA PAPAYA : AN OVERVIEW

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ABSTARCT

Plant derivatives with medicinal properties have a wide range of pharmacological significance. The properties of papaya (Carica papaya) fruit and other plant parts are well known in traditional medicine and for food and nutritional values all over the world. In recent decades, significant progress has been made in terms of the biological activity and medicinal use of papaya; it is also regarded as a profitable nutraceutical natural product plant. The medicinal properties of C. papaya are discussed in this current review.

INTRODUCTION

Medicinal plants are a gift from nature that can help you live a disease-free, healthy life because they play an important role in protecting your health. Plants have many secondary compounds that have been used as animal drugs for many years. Today's cultures have a broad understanding of natural medicine. Traditional medicine is based on beliefs and practises that existed prior to the advancement of "modern medicine" or "scientific drug therapy," and these beliefs and practises are part of our country's cultural heritage. [1]. In India, tropic and subtropical regions serve as the primary source of aromatic and medicinal plant (AMP) biodiversity, laying the groundwork for a solid foundation in traditional medicine. Plant products such as leaf, flower, and root are increasingly being used due to their ease of availability, high pharmacokinetic significance, and large-scale production. [2]. Natural products and naturally derived components from plants have been used to control toxicity, prevent food spoilage and deterioration, and extend the shelf life of foods. The significance of AMPs extracts used for nutraceutical, therapeutic, and cosmetic benefits has been demonstrated all over the world for quite some time. However, it is for this reason that they are a source of intense interest for all nations. As a result, quality and quantity are critical for widespread commercialization of these products in the global market. [3-5]. One of the most important fruit crops is papaya, Carica papaya (C. papaya) L., which is grown all over the world. According to FAO 2004, more than 6.8 million tonnes of fruit were produced in 389 990 ha [6]. einsteineruploading up to get together with (Papaya Australia, 2007). Despite the fact that it is primarily grown (more than 90%) and consumed as food in both developing and developed countries, it also has numerous medicinal properties. Papain, a proteolytic enzyme found in milky papaya latex, has numerous pharmaceutical and industrial applications [8]. It is used in food biotechnology to make chewing gums and dehydrated pulses and beans, in the textile industry to degum silk and soften wool, and in the pharmaceutical industry to chill-proof beer and tenderise meat. Papain has also been used in the manufacture of soap, shampoo, toothpaste, and skincare products. Papain's medical applications include its use as an enzymatic debridement for necrotic tissue in burns, ulcers, and other wounds in US FDA-approved topical preparations [9], as well as the preparation of vaccines and drugs for various digestive ailments. The medicinal properties of C. papaya were revealed in this review work.

MEDICINAL PROPERTIES OF C. PAPAYA

The leaves, bark, roots, latex, fruit, flowers, and seeds of C. papaya have a wide range of reputed medicinal applications, most of which are used in traditional medicine. In Jamaica, ripened C. papaya fruits were traditionally used for topical ulcer dressing to promote desloughing, granulation, healing, and odour reduction in chronic skin ulcers [10]. Traditional healers in Pakistan, India, and Sri Lanka use the green fruit for contraception, as well as for various human and veterinary diseases such as malaria, hypertension, diabetes mellitus, jaundice, and intestinal helminthiasis in Nigeria [11]. In India, the leaves were used to treat asthma, colic, fever, and beriberi (thiamine deficiency) [12,13]. Malaria and dengue fever have been reported in Sri Lanka, Pakistan, and Malaysia [14,15] and cancer in Vietnam and Australia [16]. The milky juice (latex) is employed as styptic and debridement when applied externally to burns and scalds [17]. People in Laos, Cambodia and Vietnam use latex to treat eczema and psoriasis [18]. The seeds have been used as a vermin fugue, thirst quencher and pain alleviator [19].

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SUSTAINABLE USE OF MEDICINAL PLANTS : A MINI REVIEW

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ABSTRACT

The evolution of human culture has depended greatly on the use of medicinal herbs. Medicinal plants have historically been a major source of medicine for almost all cultures and civilizations. Many of the current medicines are made from medicinal plants, which are regarded as rich sources of traditional remedies. Medicinal herbs have been utilised for thousands of years to treat illnesses, flavour and preserve food, and stop disease epidemics. The biological traits of plant species that are used all over the world are typically attributed to the secondary metabolites that plants produce. Plant-derived compounds regulate the microbial growth in a variety of environments. We provided a general summary of the medicinal plants in this article.

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INTRODUCTION

Throughout history, humans have relied on nature to provide them with their basic needs, including food, housing, medicine, clothes, flavourings, fertilisers, and transportation. This is especially true in developing nations, where herbal medicine has a long history of use, where medicinal plants continue to play a significant role in the healthcare system for vast segments of the world's population. Both industrialised and developing countries are increasing their development and acknowledgement of these plants' medical and commercial benefits. Plants have served as the basis for the usual traditional medical systems that have been in use for thousands of years. The plants are still here to provide new remedies to humankind. Some of the beneficial qualities assigned to plants have been shown to be false, and the use of medicinal herbs is based on hundreds to thousands of years' worth of experimental data. The earliest reports carved on clay tablets in cuneiform date from about 2600 BC are from Mesopotamia; among the materials that were used were oils of Commiphora species (Myrrh), Cedrus species (Cedar), Glycyrrhiza glabra (Licorice), Papaver somniferum (Poppy juice) and Cupressus sempervirens (Cypress) are still used today for the cure of diseases extending from colds and coughs to inflammation and parasitic infections. In countries like China, India, Japan, Pakistan, Sri Lanka, and Thailand, traditional medicine is widely practised. China estimates that traditional tribal remedies account for about 40% of all medical consumption. Lentils found in the Caesalpiniaceae, Fabaceae, and Mimosaceae are used in Thai herbal treatments. The sales of herbal remedies are thought to have generated more than US$2.5 billion in the middle of the 1990s. In Japan, herbal pharmaceutical items are more in demand than conventional pharmaceuticals.

Plants play a significant role in a variety of industries, including fine chemicals, cosmetics, pharmaceuticals, and industrial raw materials, among others. A vital role is played by medicinal plants in the discovery of new drugs. Medicinal herbs have demonstrated that they are the only means of treating a variety of fatal illnesses, such as cancer and diseases brought on by viral invasion, such as hepatitis. Approximately 100 plant-derived new drugs were introduced into the US drug market between 1950 and 1970, including vincristine, reseinnamine, vinblastin, deseridine, and reserpine. Between 1971 and 1990, new medicines such as artmisinin, Zguggulsterone, ginkgolides, lectinam, E-guggulsterone, teniposide, ectoposide, plaunotol, and nabilone were introduced all over the world. Irinotecan, toptecan, paclitaxel, and gomishin were among the 2% medicines introduced between 1991 and 1995. The isolation of serpentine in 1953 from the Indian plant Rauwolfia serpentine root was a groundbreaking event in the treatment of hypertension and blood pressure lowering. Vinblastine, which is used to treat childhood leukaemia, Hodgkins choriocarcinoma, non-Hodgkins lymphomas, testicular and neck cancer, was isolated from Catharanthus rosesus [3, 4]. Nothapodytes nimmoniana (Mappia foetida), an indigenous Indian tree, is widely used in Japan to treat cervical cancer. Even today, plants are not only necessary in health care, but they are also the best source of safe future medicines [5].

Despite the fact that we now have a number of modern drugs at our disposal, it is still critically important to discover and develop new therapeutic agents. It is estimated that acceptable therapy is available for only one-third of all known human ailments. As a result, the fight against diseases must continue unabated. Traditional plant medicines retain a significant position in modern-day drug industries due to minor side effects and the synergistic action of compound combinations.

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THE TRADITIONAL VENERATION OF PLANTS IN MAHAKOSHAL REGION OF MADHYA PRADESH : A PRELIMINARY STUDY

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ABSTARCT

Traditional Indian plants express the socio-cultural roots of various plants found in the Indian subcontinent, not only telling us about their medicinal properties but also emphasising their ecological importance to our survival. As a result, this became the foundation for plant conservation and may have led to plant worship. God has given specific powers to certain plants, which play an important role in human prosperity. The current study provides information on the traditional value of plants in India's Mahakoshal region. During the survey, 42 angiosperm plant species were identified that are used by people in various social and religious rituals. Plants have a strong influence on folklore, culture, food, and medicinal practises.

INTRODUCTION

Thousands of years ago, India's greatest sages founded Ayurveda, or knowledge of life, with the primary goal of alleviating human suffering. Ayurvedic sages saw all illness and all health as part of an interconnected whole-mind, body, and spirit that must be treated as one. They looked to the natural world around them for medicines and treatments, to plants used by forest tribes since the beginning of time. Man protected himself from disease by employing various parts of medicinal plants. Natural resource conservation has been an integral part of several indigenous communities around the world. Nature worship has played a significant role in shaping human attitudes towards biodiversity conservation and sustainable use. Many indigenous peoples around the world protect trees, herbs, shrubs, and small forest patches by dedicating them to the local deity, incorporating them with religious practises, or associating them with evil spirits. These practises have made a significant contribution to biodiversity conservation and protection. Various communities in India practise nature worship, which is based on the principle that all natural creations must be protected. They also have a close ritualistic relationship with many plants and trees, which they grow around the house. The sacred plants are commonly grown in clean surroundings in homestead gardens. Depending on mythological beliefs, these plants are sacred to various communities and groups. One reason for their sacredness could be their alleged association with a deity. The Mahakoshal region contains many plant species that are used by village communities for food, shelter, clothing, and medicine. Aside from these, some plants are known as Socio-religious plants because they are used by people in various social and religious customs (Ahirwar, 2010). Man's relationship with plant communities is as old as his hunger, and long before science, our forefathers studied the plants around them to meet their basic needs, laying the groundwork for civilization (Pandey and Verma, 2005). In India, many festivals are associated with the significance of plants (Dashora et al., 2010).

MATERIAL AND METHODS

Mahakoshal lies in the upper or eastern reaches of the Narmada River valley in the Indian state of Madhya Pradesh. Jabalpur is the largest city in the region. The Vindhya Range forms the northern boundary of the region; north of the Vindhya Range lie the regions of Malwa to the northwest, Bundelkhand to the north and Bagelkhand to the northeast. Chhattisgarh state lies to the east, and the Vidarbha region of Maharashtra state lies to the south across the Satpura Range. Cities and districts of the region include Jabalpur, Shahdol, Katni, Narsinghpur, Mandla, Dindori, Seoni and Chhindwara.
Various areas of Mahakoshal were surveyed and extensively covered between January 2022 and January 2023 to record the socio-religious role of plants. The data was gathered through extensive interviews and lengthy discussions with villagers in this region about the uses of plants in various rites and rituals. All of the plants were recorded and identified using the literatures of Roy et al., (1992), Mugdal et al., (1997), Verma et al., (1993), and Singh et al., (1993). (2001). A list of plants with their botanical names, local names, families, and uses has been compiled.

RESULT AND DISCUSSION

From the aforementioned survey, 42 plant species from various monocot and dicot Angiosperm groups that are used in various social and religious practises have been identified and recorded in the Mahakoshal region. The relevant information regarding the role of socio-religious plants have been documented as table -1.

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PLANTS AS EFFECTIVE IMMUNOMODULATORS DURING THE CORONA PERIOD : AN OVERVIEW

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ABSTRACT

Corona virus is a serious concern, and we are approaching it with caution as a brand. Regular consumption of potent Ayurvedic herbs strengthens the human body's immune system, which is essential for keeping even the most dreaded communicable diseases at bay. People nowadays are taking Ayurveda very seriously and taking various precautionary measures for a healthier lifestyle. We are all aware that strong immunity is required to combat any foreign body or disease. Corona virus primarily affects the lungs and respiratory system, so eating a table spoonful of chyavanprash daily boosts immunity, particularly in the lungs and respiratory system. Amalaki or amla (Emblica officinalis), guduchi or giloy (Tinospora cordifolia), tulsi, ginger, and many other Ayurvedic herbs aid in immunity building and infection prevention. The current paper is concerned with the potential of some medicinal herbs such as giloy, haldi, mint (podina), cinnamon, and others in boosting the immune system so that people can develop immunity and fight corona virus and other diseases.

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INTRODUCTION

In Ayurveda, it is said that "what heals also prevents." Herbs that are effective in treating specific conditions can also act as "food," supplying targeted nourishment to specific physiological systems and processes. Turmeric (Curcuma longa), for example, is well-known for its anti-inflammatory properties, but it can also be consumed as a culinary spice by people seeking to proactively prevent disease and maintain good health. That is not the case with allopathic medications. Another important Ayurvedic concept is the concept of synergy in nature. This is critical to remember as we isolate and investigate the specific constituent compounds in herbs. While understanding the properties of individual plants is beneficial, keep in mind that herbs typically have multiple rather than single effects. Herbs are rarely used in isolation in Ayurveda, as they are in other Asian medicine systems. Rather, they are combined in standardised but customizable formulas designed to balance and harmonise the constituent herbs' properties. Ayurvedic herbs are used for a variety of purposes, including maintaining overall health, boosting immunity, supporting mental clarity and focus, calming nerves, improving digestion, protecting the body from toxins and supporting the detoxification process, and supporting innate healing processes. The following herbs have long histories of traditional use in Ayurveda and they are increasingly popular with American consumers:

TURMERIC (Curcuma longa)

TURMERIC (Curcuma longa) is one of Ayurveda's true treasures. Consumption of the bright yellow rhizomes of this plant was first advocated in millennia past by yogis who claimed it enhanced flexibility and joint integrity. In recent years, a vast amount of research has been done on Turmeric's main components curcuminoids and curcumin. These compounds have been shown to provide many diverse benefits for human health, including preservation of brain function, high antioxidant activity, regulation of inflammation in conditions like rheumatoid arthritis, and cancer prevention (Yadav and Gaur, 2017). Curcuminoids have been used throughout history for their anti-inflammatory effects. Recent research has shown that they may suppress inflammatory pathways at multiple sites. Turmeric-derived compounds suppress production of cyclooxygenase-2 (COX-2), prostaglandins and leukotrienes while preserving the protective cyclooxygenase-1 (COX-1). This means Turmeric can provide a nice anti-inflammatory effect without the gastric complications sometimes seen with other anti-inflammatory agents such as aspirin. Turmeric also reduces thromboxane synthesis, meaning that it can reduce vasoconstriction as well as platelet aggregation. Turmeric has shown unparalleled antioxidant activity. It is interesting to note that routine consumption of Turmeric can significantly increase vitamin E plasma levels within 90 days. Although much more data is needed to corroborate the suggestion that Turmeric is a cancer preventive, early-stage studies have shown extensive chemopreventive value. It is also a potent growth inhibitor in several tumor cell line studies. Due to poor bioavailability, it is best to use standardized Turmeric extracts, which are available at 95% curcuminoid content.

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ASPARAGUS RACEMOSUS (ASPARAGACEAE) AND ITS MEDICINAL VALUE : AN OVERVIEW

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ABSTRACT

Asparagus racemosus, traditionally called as shatavari means "who possesses a hundred husbands or agreeable to many". It is regarded as a feminine tonic in Ayurveda. For the prevention and treatment of female reproductive problems such sexual debility, ammenorrhea, dysmenorrhea, dysfunctional uterine haemorrhage, endometriosis, gonorrhoea, prolapse of the uterus, etc., Ayurveda recommends asparagus racemosus (Shatavari). In cases of inadequate lactation, it is also advised as a galactogogue. Several medical professionals have utilised asparagus racemosus successfully as an anti-inflammatory, anti-microbial, and immunomodulator for numerous infectious disorders. Moreover, dairy animals' ability to reproduce and produce milk can be enhanced by asparagus racemosus. Asparagus racemosus use can also strengthen the immune system, preventing infection of the cows' reproductive and udder organs. Moreover, it can be used successfully to lessen dairy animals' stress and increase productivity, resulting in the production of pure, healthy milk from them. Asparagus racemosus has a long history of use as food and a herbal remedy. For the treatment of stomach ulcers, liver problems, inflammation, immunological disorders brought on by stress, dyspepsia, and other conditions, all portions of this plant are therapeutically significant. It also acts as a galactogogue and lowers apoptosis. Its extracts made of water and alcohol function as potent antioxidants, immune system boosters, and antitussives. It controls the amounts of cholesterol and blood lipids. Its bioactive components, including as phytochemicals (flavonoids and saponins), are used in a variety of pharmacological processes. This review is illuminating the significance and its practical methods for treating numerous ailments.

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INTRODUCTION

One of the oldest still-practicing medical systems in the world is called Ayurveda, which is derived from the ancient Sanskrit roots "ayur" (life) and "ved" in India's ancient history (knowledge). It provides a rich, all-encompassing outlook on living a healthy life. Originating in India some 5000 years ago, it has since diffused its essence throughout the world and taken a prominent place in healthcare systems. The Ayurveda is a completely herbal system of medicine. A. racemosus, popularly known as "Shatavari," is effective in treating internal heat and chronic fever as well as madhur rasam, seetveeryam, and som rogam. This herb works well for issues with the female reproductive system. Asparagus racemosus is listed as one of the formulae to cure diseases affecting women's health in the two primary works on Ayurveda remedies, Charak Samhita authored by Charak and Ashtang Hridyam written by Vagbhata. Perennial asparagus racemosus has a horizontal root stock, substantial roots, and long young shoots that are consumed as vegetables. The Indian herb Shatavari is another name for it. In India and the Himalayas, this plant is primarily grown in tropical and subtropical climates. Moreover, this plant is grown in Indonesia, Australia, Sri Lanka, and tropical Africa [2]. The Asparagaceae family includes asparagus [3]. The plant Asparagus racemosus has a woody stalk, needle-like leaves, and a tiny white flower [4]. The terms "Stalk" and "Shot" in Greek are the origin of the word asparagus. There are about 200 different species of asparagus worldwide. It is typically grown in India. Natural medicine uses some of its species, including Asparagus gonaclades and Asparagus odsendens. Asparagus racemosus root has a bitter-sweet flavour and functions as a tonic, aphrodisiac, stomachic, cooling, binding, galactogogue, diuretic, rejuvenating, carminative, and antibacterial. A. racemosus root has many positive effects in the treatment of numerous illnesses, including nervous breakdown, diarrhoea, inflammation, liver problems, cough, bronchitis, and many other infectious disorders [3]. They also produce highly useful shoots. Aldehyde, ketones, vanillin, and asparagine are found in them. Thiazole and its methyl and ethyl ester are utilised to provide flavour. On a dry basis, their blossom and ripe fruits have a 2.5% rutin and quercetin content. In leaves, you can find diosgenin and quercetin 3-glucuronide. Asparagus racemosus bark had antifungal and antibacterial effects. Powdered roots include about 3% protein, 5.4% saponins, 52.8% carbs, 18% crude fibre, 4.1% inorganic matter, and 5% oil. Due to their diuretic properties, asparagus was employed by the ancient Greeks and Romans. It aids in renal cleansing and inhibits kidney stone development. It is also highly helpful for increasing kidney cell activity

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USE OF MORINGA OLEIFERA AS A NATURAL FEED ADDITIVE IN POULTRY DIETS : A REPORT

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Moringa oleifera; poultry; growth performance; laying performance; health status.

ABSTARCT

The use of natural herbs to improve health and production outcomes has generated a significant demand in the poultry industry. There is a high demand for alternatives to antibiotics used in the production of organic meat and eggs due to the growing concerns around this problem. The goal of this study was to evaluate M. oleifera's potential use as a natural feed supplement in poultry diets. The study background, aims, key findings, and review's conclusions were all taken into consideration, along with a variety of scientific findings and published research publications. Because of its abundant supply of several nutrients with great biological qualities, M oleifera is referred to as a miracle tree. M. oleifera has been used to boost immunological function, lower cholesterol in hens, and improve growth in humans. It has both nutritional and medicinal benefits. Yet, there is still a lot of misunderstanding regarding the crucial contributions of M. oleifera to the performance of production and the health of chickens in earlier published publications. In light of this, the current study presents a summary of the experimental applications of M. oleifera on growth performance, egg production performance, egg quality, and health status in broilers and laying hens, supported by prior findings up to the present. The potential for using M. oleifera in chicken feed is proposed while taking into account the knowledge gaps from earlier investigations. The results have inspired additional research on M. oleifera to identify the most potent components and their ideal levels in both broiler and laying hen diets. The present study also shows that M. oleifera supplementation may influence poultry immunity, sound health, and production performance.

INTRODUCTION

Globally, the human population is growing by the day. Meeting the increasing demand for animal protein while also providing safe, antibiotic-free food for humans will be a major challenge for animal scientists in the future. Antibiotic resistance has fueled a renewed push to reduce antibiotic use in livestock and poultry production.[1,2]. Herbs and their extracts have been shown to promote growth in poultry [3]. Furthermore, various natural medicinal plants and their extracts have been used as feed supplements to replace antibiotics in poultry production [4,5]. Furthermore, Mahfuz et al. [6] reported that poultry scientists are now committed to using unconventional natural feed supplements, which may play a role in potential therapies to improve chicken health and production performance. As a result, poultry researchers are looking for natural feed resources that are both environmentally friendly and safe for human society [7,8]. Moringa oleifera is a well-known cultivated species in the Moringa genus (family Moringaceae) of the Brassicales order. Moringa oleifera is also known as moringa, drumstick tree, horseradish tree, and ben oil tree or benzoil tree or miracle tree [9,10,11]. M. oleifera is indigenous to South Asia, particularly India, Sri Lanka, Pakistan, Bangladesh, and Afghanistan, as well as North Eastern and South Western Africa, Madagascar, and Arabia [12,13,14,15]. Moringa seed and leaves are widely used in the food industry and for medicinal purposes [12Its seeds, flowers, and leaves are used in human food and herbal medicine [16]. In various countries around the world, different parts of the M. oleifera tree are used as a good source of human nutrition and in traditional diets [17,18]. In addition, M. oleifera seed powder contains polyelectrolytes, which are the most important active ingredients in water purification [18,19]. Moringa oleifera is very useful as a feed supplement for animals, as its leaves are highly nutritious. The leaves of M. oleifera are the most nutritious part, being a significant source of vitaminB complex, vitamin C, pro-vitamin A as beta-carotene, vitamin K, manganese, and protein among other essential nutrients [20]. Moringa oleifera leaves have antimicrobial roles and are rich with fats, proteins, vitamins, and minerals [18,21]. The extracts from leaves of Moringa oleifera contain low amounts of polyphenols, which might have effects on blood lipid metabolism [20,22]. Moringa oleifera can be used as a source of micronutrient and as a dietary supplement in poultry [23,24]. In addition, Moringa oleifera leaf powder has anti-septic and detergent properties due to presence of different phytochemicalsin the leaves [25]. Moringa oleifera was reported to be an excellent source of vitamins and amino acids that reportedly boost immune systems [17]. The seed extracts of moringa are rich in polyunsaturated fatty acid [26,27]. Moringa oleifera exhibits anti-oxidant properties that can suppress formation of reactive oxygen species (ROS) and free radicals [27,28]. Until now, the use of M. oleifera in farm animals to improve production performance and health status has been limited. Even though it has been established that M. oleifera has medicinal importance for chicken health, the inclusion levels of M. oleifera in poultry rations and their mode of action are still being researched. Taking this into account, the current study focuses on the use of M. oleifera as a natural feed supplement as well as an alternative to antibiotics that can improve chicken performance and health.

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Wildlife Conservation and Management

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Abstract :- Concept of life conservation has been around since precedent days. Restrictions on taking games are mentioned within the Bible, First official season might are established within the 13 century by Kubla Kahn. Today, wildlife conservation has evolved into a science, however its goal remains primarily the same: to make sure the wise use and management of renewable resources. Given the proper circumstances, living organisms that we tend to decision renewable resources will fill again themselves indefinitely. Because all of us depend on plants and animals for all very important parts of our lifes, it's over a matter of convenience that they still exist; it's a matter of life and death. Being living units of the ecosystem, plants and animals contribute to human welfare. Human society depends on genetic resources for nearly all of its food; nearly half its medicines; a lot of its clothing; in some regions, all of its fuel and building materials; and a part of its mental and religious welfare. The science of zoogeography has each ecological and historical aspects.

Key Words :- wildlife management, wildlife conservation.

Introduction :- Wildlife contains those varieties of animal life that aren't domesticated. Individual members of untamed species command tame in captivity are still thought of "wildlife" as they're not genetically totally different from those remaining in a very wild state. Wildlife conservation and management is that the conservation, use and management of wild-animal populations and of the land necessary to support them to confirm that productivity and ecological balance are maintained in permanency, whereas social advantages are accomplished. Human action has become one amongst the foremost vital influences on the abundance and well-being of life. Presence or absence of animal or plant in a very region is set by ecological and historical factors. Animals and plants are live indicators of the characteristics of their environment; their ranges mark the places wherever environmental conditions are identical or similar. To interpret the vary of a species properly, it's necessary to understand, in detail, the conditions needed for the species to measure and thrive.

Background of Wildlife Conservation and Management :- he continued existence of human society and wildlife needs a well-balanced compromise between the wants of recent society and therefore the conditions for wild species to survive and propagate.

The evolution of wild life conservation and management over the past fifty years could be a fascinating story of however humans relate to the atmosphere and therefore the use of natural resources. Changes in human societies, new agricultural technologies and industrial developments have resulted in surroundings losses, resource overuse and therefore the world crisis from the loss of biodiversity.

Conservation and Preservation :- Wildlife conservation helps guarantee future generations will fancy our resources. Conservation will embody harvest natural resources, activities like hunting, fishing, trapping and harvest home timber also as non-consumptive activities like bird observance, photography, and hiking. Conservation should balance problems between life and human populations. Conservation of life implies insuring

को पूरा करने के लिए आरसीवी और आरआरवी को नाबार्ड द्वारा प्रदान किया जाएगा।

४. मछुआरों को सहयोग: प्रधानमंत्री मत्स्य सम्पदा योजना (पीएमएमएसवाई) मरीन और इनलैंड फिशरीज के एकीकृत, सतत और समावेशी विकास के लिए शुरू की जाएगी। इस योजना के अंतर्गत मरीन, इनलैंड फिशरीज और एक्वाकल्चर संबंधी गतिविधियों पर ११,००० करोड़ रुपए खर्च किए जाएंगे और ९,००० करोड़ रुपए इंफ्रास्ट्रक्चर के विकास के लिए खर्च किए जाएंगे (जैसे कि मछली पकड़ने के बंदरगाह, कोल्ड चेन, बाजार)।

५. पशुपालन इंफ्रास्ट्रक्चर विकास: डेयरी प्रसंस्करण, मूल्य संवर्धन, और पशु चारे से संबंधित इंफ्रास्ट्रक्चर में निजी निवेश करने के उद्देश्य से १५,००० करोड़ रुपए का पशुपालन इंफ्रास्ट्रक्चर विकास फंड स्थापित किया जाएगा। उत्कृष्ट डेयरी उत्पादों के निर्यात हेतु संयंत्र स्थापित करने के लिए प्रोत्साहन दिया जाएगा।

सन्दर्भ गन्थ सूची :–

1- aatmnirbharsena-org
2- Presentation made by Union Finance & Corporate Affairs Minister Smt- Nirmala Sitharaman under Aatmanirbhar Bharat Abhiyaan to support Indian economy in fight against COVID&19 Ministry of Finance May 13 2020PRS-
3- https//static-pib-gov-
4- www.google.com/wikipedia.com
5- www.wikipedia.com

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25

Biodegradation of Weed biomass Through Vermicomposting

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Abstract - Studies were made for partial decomposition of obnoxious weeds viz. Parthenium (Parthenium hysteropherus L.), Ipomoea (Ipomoea cornea L.), water-hyacinth (Eichhornia crasspes L.), and Lantana (Lantana camara L.) with the use of four additives viz. fresh cow dung (a), Trichoderma (b), a+b and no any additives before releasing the earthworm for vermicomposting. These studies were made during the period between February to May months. Results reveal that Ph and temperature of the substrata enhanced in the beginning of the partial decomposition, which were unsuitable for releasing the earthworm. The pH and temperature of substrata became around 7.5 and 30°C, respectively up to end of third week of partial decomposition, which were quite suitable for releasing the earthworm.

Key words: Vermicomposting, Weed biomass, Earthworm, Biodegradation, Obnoxious weeds

Introduction - Basic priniciple of vermicomosting- The process of vermicomosting is to raise the number of nutrients present in the soil. compost has a property of allowing water to the plant that are growing.The choice of organism used here are earthworms as the consumer of the organic matter and casting are produced when they excrete.During the vermicomosting process, earthworms play in

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Comparing Efficacy of mRNA and AstraZeneca vaccines against SARS-CoV-2variants of concern

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Abstract: Since upsurge of coronavirus pandemic in December 2019, caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), the number of confirmed cases has increased more than 308 million worldwide, with nearly 5 million deaths. Vaccines are best way to control covid-19 pandemic as suggested by researchers all over world. Current COVID-19 vaccines were based on the SARS-CoV-2 spike protein, which virus used to bind and infected host cells. But the emerging "variants of concern" seemed to be more transmissible or deadlier than the wild-type SARS-CoV-2,containedmutations in the spike protein, questioning vaccine efficacy concerns. Multiple vaccines Pfizer-BioNTech, Moderna Sinopharm, Sinovac, Oxford-AstraZeneca, Sputnik V, Novavax have been granted authorization for vaccination against covid -19 in different countries. Despite authorization having been granted for multiple vaccines, as the ongoing global outbreaks demonstrated, the pandemic is far from over. This review discussed mutations in spike proteins and compared effectiveness of mRNA and AstraZeneca against variants of concern. Vaccine effectiveness was increased ≥7 days after the second dose against Alpha for all three vaccines: mRNA-1273=92% (95% CI, 88–95%), Pfizer=89% (95% CI, 87–90%), and AstraZeneca=91% (95% CI, 62–98%). Efficacies for double dose mRNA vaccines are 84%, 88%, and 77% respectively against both Beta and Gamma variants together in multivariate analysis. Efficacy reported for greater for Beta compared to Gamma variant. Vaccine effectiveness of the two-dose regimen of AstraZeneca after 14 days of the second dose is 77.9% (95% CI, 69.2–84.2) against Covid-19, 87.6% (95% CI, 78.2–92.9) against hospitalization, and 93.6% (95% CI, 81.9–97.7) against death for Gamma variant. The effectiveness of two doses Of Pfizer and AstraZeneca was documented 88.0% (95% CI, 85.3 to 90.1) and 67.0% (95% CI, 61.3 to 71.8) against the Delta variant. There was no effect against Omicron from 15 weeks after AstraZeneca two dose regimens, while VE after Pfizer two dose regimen was 88.0% (95%CI: 65.9 to 95.8%) 2-9 weeks after dose 2,

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Butterfly papilionoidea (Lepidoptera, Rhopalocera) fauna from Jabalpur region (M.P.): Preliminary survey

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Abstract
Biological diversity refers to the variety of life on Earth including plants, animal, Bacteria and Fungi. Butterflies are one of the most important assemblages of insects that act as bio indicators as well as nature's gardeners. The present paper is based on the Survey Report on the Butterfly fauna of Jabalpur Region, Madhya Pradesh. Faunistic surveys were undertaken during July 2021- August 2022 and a total of 1143 individuals Lepidoptera (Rhopalocera) belonging to 47 species, 39 genera under 04 families from various localities in and around the Jabalpur, of which the members of family *Nymphalidae* is outnumbering the other butterfly families. Moreover, the study revealed 08 butterfly species newly recorded in the Central Indian landscape. Shannon-Weiner diversity index of the study site is -3.506764433 showing high diversity which is inversely proportional to Simpson Index value that is 0.034935156. The area of study having high organic pollution and rich diversity of butterflies, therefore it should be of great importance for conservation. The aim of this research is to contribute to the development of planning and management strategies for diversity restoration in the studied area.

Keywords: biodiversity, host plant, family, butterflies, species richness

Introduction

Being the most beautiful and colorful creatures, the aesthetic importance of butterflies has increased a lot. Lepidoptera (Rhopalocera) maintaining the balance of nature. They are generally regarded as the best taxonomically studied group of insects. Second largest insect order Lepidoptera (Butterflies; Rhopalocera and Moths; Heterocera), about 1,49,969 species recorded worldwide belonging to 126 families (Life Catalog, 2021). In the entire continent, No Lepidoptera species have been recorded so far in the continent of Antarctica. Butterflies show Holometabolism and pass through different stages like egg, larva, pupa and adult stage. They play a role as pollinators and food chain components, as well as enabling the maintenance of ecosystem services. Being an indicator of the health and quality of ecosystems, butterfly finding becomes important. Butterflies serve as important plant pollinators in the local environment, and help to pollinate more than 50 economically important plant crops (Borges *et al*., 2003) [2]. Butterflies are also good indicators of environmental changes as they are sensitive to habitat degradation and climate changes (Kunte, 2000) [7]. Tiple (2011) [12] reported in his research that the Indian subcontinent hosts about 1,504 species of butterflies, of which peninsular India and the Western Ghats host 351 and 334 species, respectively. In the recent past, several researchers have studied butterflies from some districts and conservation areas of Madhya Pradesh and Chhattisgarh (Singh and Chandra, 2002; Siddiqui and Singh, 2004; Chandra, 2006) [11, 5, 4]. Chandra *et al*., (2007) [5] recorded 174 species of butterflies belonging to eight families from Madhya Pradesh and Chhattisgarh.

Material and Methods

Jabalpur (Known as Sanskardhani) is one of the largest cities in Madhya Pradesh and located in the centre of India at 23.17°N and 79.94°E (Map 01). The city of Jabalpur has a humid subtropical climate with a wet monsoon season from June to October, a cool dry winter from October to March, and a hot dry season from April to early June with the onset of rains. Minimum temperature recorded 10°C and maximum 45°C, humidity 11-17% to 62-96%. The annual rainfall is on average 1,388 mm. All research sampling sites were within and around Jabalpur region within 30km radius. The research is based on 01 year random surveys conducted during July 2021- August 2022 around Jabalpur region, Madhya Pradesh. Butterfly abundance and seasonality was observed from 5am to 11am in the morning and from 4pm to 7pm in the evening by line transect counting. Butterflies were identified in the field directly by observation and in difficult cases followed by capture or photography. In critical situations, samples were collected with handheld aerial sweep nets. Each sample was placed in a plastic bottle and taken to the laboratory for further identification with the help of a field guide (Wynter-Blyth, 1957; Kunte, 2000) [18, 7]. In the present study, all scientific names followed Varshney and Smetacek (2015) [17] and Kehimkar (2016) [6] guidelines.

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A survey report on the spider (Arachnida: Araneae) of Jabalpur division (Madhya Pradesh)

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Abstract
Ecological study still relies heavily on an understanding of the quantity, diversity, and composition of species within an ecosystem. Early naturalists were fascinated by the patterns of geographical and temporal variation in variety, and ecologists are still today. Only 15% of species have had their ranges formally defined, however measuring biological diversity within a system enables the discovery of new species and their distributions. It is this fundamental comprehension of the species that make up a system that enables us to pose more challenging ecological queries. The preliminary report on the spider fauna of Madhya Pradesh, India, provides the basis for the present article. Faunistic surveys were undertaken during 2019-2021 and a total of 97 individuals Arachnida (Araneae) belonging to recorded 18 Species, 15 Genera under 08 families from various localities in and around the Jabalpur division whereby the Araneidae family has a greater population than the other spider families. Shannon-Weiner diversity index of the study site is 2.643032269 showing high diversity which is inversely proportional to Simpson Index value that is 0.084281008.

Keywords: spider (Arachnida: Araneae), Araneidae, Jabalpur

Introduction
In almost all environments, spiders are numerous and widely distributed. Being one of the only predators of insects, particularly those dangerous to humans, and aiding in the maintenance of ecological equilibrium, it plays a crucial function in ecology. Spiders form one of the largest groups of invertebrate animals World Spider Catalog includes around 47,662 species in 4,097 genera and 117 families (WSC-NMBE, 2018: Version 19.5). They are distributed worldwide, occur on all continents except Antarctica, and are found in every conceivable terrestrial habitat, including caves, snow-covered tundra, high mountains and intertidal zones. The Indian spider list has been updated by Siliwal *et al*., (2005) [8] with 1442 species organized into 361 genera and 59 families. In India, 156 spider species from 145 genera and 60 families were reported by Sebastian *et al*., (2009) [7]. Overall 86 spider species, including 16 species from the Kanha National Park, 27 species from the Pench National Park, 29 species from the Satpura National Park and 14 species from the Indravati National Park are listed in Ramkrishna *et al*., (2006) [6] documentation of the faunal resources of all national parks in Madhya Pradesh and Chhattisgarh. 214 spider species from 68 genera and 22 families, including those from Chhattisgarh, were recently updated by Patil (2011) [3]. The ecological development of these types is attributed to various climatic, edaphic, and topographic factors. However biotic factors play a significant role depending upon their frequency and intensity. Therefore spider can consider as indicator in case of change in environmental condition or interference of human activities. Ironically, the spider diversity in central India is still not fully explored or understood.

Material and Methods
The spider fauna of several ecosystems in central India was collected from wild plants, crops, and agricultural fields. Spiders were caught using an insect net, pitfall trap, and stroking sticks umbrellas from various locations in the Jabalpur division. One of the major tourist sites in the nation is Jabalpur. Some of the top locations in the nation are found there. The coordinates of Jabalpur are 23°10′N latitude and 79°56′E longitude.

The samples were labelled and kept in 70% alcohol. We manually collected spiders from bushes, tree trunks, ferns, the forest floor, foliage, and grasslands using Tikader's advised method (1987) [9]. With the help of keys and catalogues provided by Kaston (1978), Tikader (1962, 1973, 1982) [10, 11, 12], (Biswas and Biswas, 1992) [1], Gajbe (1987) [2], and Platnick, identification of various body parts was carried out based on their morphometric characteristics (2004). After being photographed and documented while still alive, the spiders were then returned to their native environment.

Few spiders were observed under microscope for identification and study of some morphological characteristics. Mangurran (1988) used the Shannon-Weiner equation to calculate the Shannon-Weiner diversity index (H), and Sklar (1985) used the Simpson index (C) to obtain the dominance index.

1. Calculation of Shannon's Species Diversity Index (H)

$H = -\sum (ni/N) * \log (ni / N)$ Or $-\sum Pi * \log Pi$

Where,
H = Shannon Index of Diversity.
Ni = Number of individual of each species.
N = Total number of individuals in the sample, (i.e., $N = \sum ni$).
Pi = Importance probability for each species, (i.e., Pi = ni / N)

Bugs R ALL
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First record of Xerces Blue Butterfly from India

Xerces Blue Butterfly *Glaucopsyche xerces* (Boisduval, 1852): a–Dorsal view | b–Ventral view | c–Natural habitat.

One of the most iconic insects, the Xerces Blue Butterfly *Glaucopsyche xerces* (Boisduval, 1852) is the member of family Lycaenidae, subfamily Polyommatinae, and tribe Polyommatini (Catalogue of Life 2022). It was first described in 1852 and was of great interest to butterfly experts because individuals exhibited incredible variation in their wing patterns. The Xerces Blue is believed to be the first American butterfly species to become extinct as a result of loss of habitat caused by urban development.

The last Xerces Blue was seen in 1941 or 1943 on land that is part of Golden Gate National Recreation Area, San Francisco. The last specimens were reportedly collected by entomologist W. Harry Lange on 23 March 1941, and the Xerces Blue has never been seen flying again (Downey & Lange 1956).

A single specimen was observed and photographed on 19 October 2021 near Bargi Dam area (22.941° N, 79.92253° E) Jabalpur, Madhya Pradesh, India. It was sitting on top of a flower of *Tridax procumbens*. The Xerces Blue is a small, brightly coloured butterfly characterized by iridescent blue on the upper wing surfaces of males, and pale spots below. The butterflies compared with specimens of the Florida Museum in terms of wings pattern, colour, shape, antenna and their segment, size, & other taxonomic key patterns (Boisduval 1852). Meticulous comparison led to our butterflies specimens photographically matching with the

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RESEARCH ARTICLE

PRELIMINARY INVESTIGATION AND RECTIFIED CHECKLIST OF MEDICINAL PLANT OF NARMADA RIVER, JABALPUR REGION

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ABSTRACT

India is regarded as the world's botanical garden and a repository for biodiversity. The major objective of this paper is to categorize the medicinal plants that grow around the Narmada River in the Jabalpur region of Madhya Pradesh and to describe how these plants are used to treat human illnesses. From September 2022 to February 2023, exploratory field excursions were performed to the village to examine the therapeutic plants and gather information from the residents. From this investigation, 107 species of useful medicinal plants from 49 families were identified, and the villagers provided information on their ethno-medical uses. The focus of this study is on the value, application, and preservation of medicinal plants among humans.

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INTRODUCTION

The Indian system of medicine has identified 1500 medicinal plants, 500 of which are primarily used in drug preparation and healthcare. Plants have enormous potential to become renewable sources of high-quality raw materials for industry, as well as a source of genetic diversity that can lead to the discovery of new things (Bartle, 1997). For health care, a large proportion of the world's population relies primarily on plants and plant extracts. Madhya Pradesh has a wide range of edaphic and climatic conditions that encourage the growth of a variety of medicinal plants. Folks use over 1100 medicinal plants as traditional medicines, which are found in the forest of the Satpura Vindhyan range of the state. Millions of people have used medicinal plants to promote and protect their health, relieve pain and discomfort, and cure diseases. According to their utility in curing various problems, these are used in various ways, such as bark, leaves, roots, stems, seeds, flowers, and fruits. Ayurveda treats patients holistically in relation to the environment. The medicinal herbs are among the chief sources it employs for maintaining or restoration of health. The curative properties of medicinal plants are growing in popularity because they are natural, non-narcotic, inexpensive even in impoverished areas, and have no side effects. Forest flora includes a variety of plants with medicinal properties that are used as food, timber, and fuel wood. According to Oomachan and Srivastava (1996), Madhya Pradesh is a unique state with a high concentration of tribal people in various pockets of forest ecosystem. He went on to say that these tribes' lives were intertwined with several herbal plants/products growing in the forests, which they used in folk medicine. The medicinal plants were gradually uprooted from the forest in wild forms, and due to heavy exploitation, many of the species are on the verge of extinction due to commercial utilisation. The export of such plants has reached 60 billion US dollars and is growing at a rate of 7% per year. WHO, 2001 Report, India exports 80,000 tonnes of medicinal plants in their natural state to the United States, the United Kingdom, and other countries.

METHODOLOGY

STUDY SITE: From September 2022 to February 2023, plant exploration work was carried out in the Jabalpur region to document the floral diversity of medicinally valuable plants. River Narmada is India's fifth largest river, flowing westward from the Mekhala range at an elevation of 1051 meters above sea level. Jabalpur is a major tourist destination in the country. Jabalpur is located between the latitudes of 23°10'N and 79°56'E. An intensive and extensive plant survey was conducted, covering almost all habitats and seasons.

COLLECTION AND IDENTIFICATION OF PLANT: Study was done on the vegetation and plant dispersion patterns. For the preparation of the herbarium and plant collection, standard procedures had been used (Jain and Rao 1977). Flora and Keys, as well as other literature that was available, were used to identify different plant species (Hooker 1892-1897; Ray 1984; Mudgal et al., 1977; Hains 1921-1924 and Saket & Saini, 2016).

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First report of Zygoptera and Anisoptera (Odonata: Insecta) near Johilla river at Umaria district (M.P.)

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Abstract
Odonates are potential biocontrol agents for many invertebrates, and biodiversity conservation and protection is a national and international agenda that is responsible for the long-term development of a region or country. The first report of Odonates from the Johilla River in Umaria District has been investigated. During the study 35 species of Odonata Belonging to 06 families of 02 Suborder were observed. Out of 35 species recorded, 17 species belonged to family Libellulidae (48%) making it the most specious and dominant family. Second most abundant family was Coenagrionidae (29%) which consisted of 10 species. This was followed by family Lestidae 03 Species (08%), Aeshnidae and Gomphidae both with 2 species (6%) each, Platycnemidiae with 1 species (3%). The Shannon's Index of odonata H=3.210710732 and Simpson C=0.049064332 was determined. For the first time, a comprehensive catalogue of odonates recorded from the Umaria district's Johila river area is presented. More research is needed to examine sources and a much wider geographic area.

Keywords: Odonata, johilla river, species diversity, bio control, first report

Introduction

Amazing insect species known as odonates have a great chance of surviving and thriving in perennial river systems with a diversity of habitat types. According to Ramesh *et al*. (2010) [16], measuring the diversity levels of ecosystem indicator groups should allow for the prediction of the presence of other taxa, emphasising the significance and suitability of utilising invertebrate groups as indicators (Oliver and Beattie, 1993; Pearson, 1994) [14, 15]. Odonata are found on all continents, though tropical forests are typically the richest in species (Kalkman *et al*., 2008) [10]. Odonates, an order of invertebrate insects that includes dragonflies and damselflies, are constantly alluring to people because of their wide range of colours, agile flight, and exceptional vision. Around 6000 different species of dragonflies were described by Silsby (2001). Though the real number of species may surpass 7,000, the Odonata has about 5,680 species globally. The current rate of new Odonata species descriptions is around 200 per decade (Kalkman *et al*., 2008) [10].

According to Subramaniam (2009), there are 470 species in 139 genera and 19 families in India. These species are important as markers of the health of the aquatic and terrestrial ecosystems and also play a crucial role as prey and predators in maintaining the balance of the tropic levels of the food chain. As top predators, they are also a significant and extensive part of freshwater ecosystems (Corbet, 1962) [5]. According to a recent study, around 10% of the world's dragonflies are probably vulnerable, while 35% have insufficient information. (Clausnitzer *et al*., 2009) [4]. Odonata spend their larval lives in aquatic environments and, as adults, make use of a variety of terrestrial habitats. The Johilla Valley area is bordered by a very diverse range of trees, a small hill, a wide grassland, and a mini-forest; these are the components for designing a suitable habitat for such species. Odonata have been recognised as excellent environmental health indicators and are an accessible category that may be utilised to evaluate the overall biodiversity of aquatic ecosystems (Kalkman *et al*., 2008, Corbet, 1999) [10].

Materials and methods

The present research will be carried out in the Johilla River Umaria district. Umaria District lies under Shahdol, division the surface of the district may be divided in to 4 different Physiographic regions, the shale, sandstone, plateaus and Pindaric basic. It is located between 22°Latitude and 82°11'Longitude and is situated on the Vindhyan plateau at elevation of 330m. It is a tributary of the Son River, which itself is a tributary of the Ganges River. The Johila (23.645°N 81.236°E) originates at a place called Jwaleshwar in Maikal hills, 10 km from Amarkantak in Anuppur district of Madhya Pradesh. It merges with Son river in Manpur tehsil of Umaria district (Figure 01).

Odonata sampling was carried out over a seven-month period, from July 2022 to January 2023. The sites are visited early in the morning from 5-10am, and in the evening from 4-7pm, to record the maximum number of dragonfly species and their activities (Sampling one visit in a week). The current study is based on the population of dragonflies and damselflies. Observations are made by walking a large area of the site with binoculars and digital cameras. The Fauna of British India by Fraser, F.C. (1933, 1934, and 1936) [7, 8, 9], Mitra, T.R. (2006) [13], Subramanian, K.A. (2005 and 2009) [20, 21, 2, 9], Andrew *et al*., (2009) [2], taxonomic keys were used for identification. According to Tiple *et al*., 2008 Protocols, the Odonates were classified based on their abundance in Johilla, which was shortened as VC - Very Common (51-100Sp), C - Common (26-50Sp), R - Rare (11-25Sp), VR - Very Rare (01-10Sp). The Shannon-Weiner diversity index (H) was calculated using Mangurran, A. (1988) Shannon-Weiner equation, and the Simpson index (C) was calculated using Sklar, F.H. (1985) [17].

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Removal of m-chlorophenol from Wastewater by Adsorption onto Flyash Produced from Thermal power plant: Kinetic Modeling Studies

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ABSTRACT

Adsorption technique is widely used for removal of toxic organics from aqueous solutions. As commercial activated carbon is an efficient adsorbent, it's widespread used is restricted due to its high cost and substantial lost during regeneration. The aim of this study is to investigate the possibility of flyash (FA) as an alternative adsorbent for phenols removal from aqueous solution .The removal characteristics of m-chlorophenol (MCP) from aqueous solution by flyash is investigated under various conditions of contact time, particle size, pH, concentration and temperature. The level of uptake of m-chlorophenol by flyash decreased with increasing particle size and pH but increases with temperature. Rate constants for different conditions are evaluated using first-order kinetics. The experimental results underlined the potential of flyash for removal of m-chlorophenol from wastewater. The main mechanisms involved in the removal of m-chlorophenol from solution by flyash are electron –withdrawing effect of chloro group of benzene ring and adsorption at the surface of the flyash. It is found that these low cost flyash adsorbent demonstrated good removal capability of phenols and hence can be used economically on large scale for m-chlorophenol.

Key Words: Flyash, m -chlorophenol, adsorption, kinetics, mechanism.

INTRODUCTION

Wastewater congaing phenolic compounds are a serious environmental problem releasing into the environment without treatment. The toxic and hazardous nature of phenol and its derivatives have been well documented and can cause several health problems.[1] it is of major concern that organic pollutants are present in the environment because of their toxicity, bio-accumulative tendency, and threat to human life and the environment. Phenolic compounds have been classified as high priority pollutants by EPA (Environmental Protection Agency) of USA. The Ministry of Environment and forest (MOEF), Government of India and EPA of USA have listed phenols on the priority pollutants list. Chronic toxic effects due to phenols reported in humans including vomiting, difficulty in swallowing, anorexia, liver and kidney damage, headache, fainting and other mental disturbances and excretion of dark urine .[2-3]scientists for the conversion of fly ash into beneficial products while probing doable avenues for allure tenable utilization. Wastewater remediation utilizing Fly ash is one aforementioned attempt solving two together waste administration and water quality issues. Phenols are generated from industrial sources, such as refineries, petrochemical, pharmaceuticals and plastic resin production. Phenols are not only toxic but also carcinogenic in nature[4-5].Phenols have high stability in the aqueous phase and thus causes serious risk to the aqueous environment. Also it is detrimental to human health due to rapid absorption through the skin.[6-8] Phenols have attached much public attention due to its presence in ground water, river and drinking waters. Even in low concentration, Phenols causes toxicity and foul odor to the water.

This is due to its reactivity with chlorine (-Cl) and nitro (-No $_2$) group present in the soil to from chlorophenol and nitro phenol respectively.[9] Most countries specify maximum allowable concentration of phenol in wastewater to be less than 1ppb.[10] The exposure of phenol and its derivative compounds to human and animal causes liver and kidney damage, central nervous system impairment, diarrhea and excretion dark urging.[11-12] This makes it necessary to develop methods that allow one to detect quantity and remove phenol from wastewater. [13]Several conventional methods are available for treating phenolic wastewater which include reverse osmosis, anaerobic processes, the electro Fenton method, combined application of flotation and conjugation process, stripping and oxidation, solver extraction etc.[14] Each of these methods has some disadvantages in their application. Among various methods used in phenol wastewater treatment, 'adsorption'

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OPEN SOURCE OF E-LEARNING MANAGEMENT SYSTEM.

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Abstract

E-learning is not going away any time soon and has the potential to make a far more significant impact on higher education in the years to come. On the other hand, there are certain disadvantages associated with taking classes online, such as the fact that students are required to make a time commitment and are held to a lower level of accountability than they would be in a traditional classroom setting. Students frequently report that using the internet makes it impossible for them to maintain their motivation since it gives them the impression that they are all by themselves in the world. Other challenges include the following: In addition, teachers have the impression that they lack the power to prevent pupils from cheating and to maintain order in the classroom

Keyword: E-learning, higher education, traditional classroom and online learning

Introduction

The evaluation of students has always been one of the main challenges of the teacher, both in a face-to-face context and in the current context in which technology is an integral part of the teaching learning process. As Brown (2005) states, "evaluation is probably the most important thing we can do to help our students learn"; being a "central aspect of education and curriculum" (Boud and Associates, (2010), the evaluation should be used as a "pedagogical strategy, not as an instrument for verifying learning" (Caldeira, 2004). Both in a face-to-face and in an online context, the "understanding of the evaluation and the choice of evaluation instruments should be in line with the pedagogical project of the course" (Nunes, 2010). As Brown (2005) argues, the evaluation "it must be adjusted to its purpose" and being a continuous process of a very diverse nature, given the multiplicity of skills and learning to be developed, it should, as Sanavria (2008) point out, be careful when defining techniques and assessment instruments.

In the face-to-face context, and in order to verify the learning performed by the students, in addition to formal procedures, such as tests, the teacher uses other complementary mechanisms, such as observation and participation in class. In this way, the teacher can make adjustments to the planning of his classes, that is, he/she can change the pace of the class, use complementary material, use different methodologies. In distance education, assessment is especially challenging since teachers do not have verbal and visual indicators.

Literature

Moore (1989) advocates the need for students to share responsibility for their own learning processes. The student's autonomy has to do with the student's ability, before the programmatic contents of the course, to establish their own objectives, methodologies and materials to be used, as well as stages and ways of evaluating their learning and acquiring knowledge/skills.

Macdonald (2008) associates evaluation with the development of competent e-students. These e-students, according to the author, when using computers as a study tool, develop communication and interpretation skills as well as analysis and critical sense.

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Credit risk assessment with imbalanced data sets using SVMs

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***Abstract*—*Support Vector Machine* or *SVM* is one of the most popular supervised learning algorithms, which is used for classification as well as regression problems. Support vector machines (SVM) have a limited performance in credit scoring issues due to the imbalanced data sets in which the number of unpaid is lower than paid loans. In this work, we developed an SVM model with more kernels on a set of imbalanced data and suggested two data re sampling alternatives - random over sampling (ROS) and synthetic minority oversampling technique (SMOTE). The aim of this work is to explore the relevance of re-sampling data with the SVM technique for an accurate credit risk prediction rate to the class imbalance constraint. The performance criteria chosen to evaluate the suggested technique were accuracy, sensitivity specificity, error type I, error type II, G-mean and the area under the receiver operating characteristic curve.**

Keywords*—*support vector machines, credit risk assessment, random over sampling, imbalanced data sets, SMOTE, performance criteria.

I. Introduction

Credit scoring plays an important role for banking institutions to improve their risk assessment measurement. It has been one of the main fields of application of classification issues and attracted growing attention in recent years (Crook et al., 2007). The construction of a powerful credit scoring model is always an exciting challenge because the possibilities for further improvements are almost endless, especially due to the continuous increase in the complexity of parameters that determine solvency.

The literature has shown that credit scoring is an accurate technique for evaluating and measuring credit risk. Many definitions of credit scoring have been proposed by researchers and fully converge to the same principle, which is the detection of the risk of non-repayment of a loan through the prediction of client default probability (Crook et al., 2007; Hand and Henley, 1997; Thomas et al., 2005). Many modeling alternatives, such as traditional statistical methods and non-parametric methods have been developed to manage credit scoring tasks. Then, more powerful models based on artificial intelligence have become popular among researchers. In fact, in practical credit risk assessment applications, most forecasting models often make wrong decisions because of a lack of default data.

The context of imbalanced dataset classification poses a serious challenge for researchers in credit scoring. The main problem is that the number of insolvent clients is usually much smaller than the number of those who are creditworthy. Therefore, the classifier tends to promote healthy clients in the majority class. In other words, healthy clients could be over-represented in the model and can be identified with high accuracy, but insolvent clients, the minority class, are not properly identified. However, to minimize credit risk, it is more important to identify insolvent clients.

This paper presents a range of experiments on a credit data set that has been artificially modified by using two re-sampling techniques [random over sampling (ROS) and synthetic minority oversampling technique (SMOTE)] and a forecasting method. The method we implemented here is the support vector machines (SVM) with multiple kernels. Results were evaluated according to their matrix of confusion and the area under the receiver operating characteristic (ROC) curve (AUC). Performance measures widely used in credit risk prediction systems are: accuracy, type I error, type II error and AUC (Verikas et al., 2010).

II. LITERATURE REVIEW

A. Credit Scoring

Credit scoring is a system aimed at ranking credit applications: Those that have a high probability to meet the financial obligations are classified as 'good' and those with a low probability are classified as 'bad' (Akkoç, 2012; Lee et al., 2002; West, 2000). The score is defined as a tool for early detection of financial difficulties of borrowers. It draws on a statistical approach and leads to a probabilistic risk analysis. A score is a risk rating, or a default probability. Credit scoring is a technique for determining a linear combination of the following form:

$$Z = \alpha_1 R_1 + \alpha_2 R_2 + \ldots\ldots + \alpha_n R_n$$

With Z: borrower score, R_i: Ratio i of the borrower, α: the weighting coefficient of the ratio R_i.

Thomas et al. (2002) defined credit scoring as a set of decision models and techniques that help lenders in the decision to grant credit. The objective of these models is to assign a score to a potential borrower to estimate the future performance of their loan. It is mainly used by banks to predict the probability of default on individual

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TREATMENT AND CONTROL OF FISH DISEASES WITH SPECIAL REFERENCES TO PROTOZOAN AND FUNGAL DISEASES

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Fish, diseases, pathogens, microorganisms and parasites, treatment and control

ABSTRACT

Similar to other animals, fish can also suffer from different diseases. All fish carry pathogens and parasites. Disease is a prime agent affecting fish mortality, especially when fish are young. Pathogens which can cause fish diseases comprise: viral infections, bacterial infections, fungal infections, protozoan infections, water mould infection, etc. Fish are also exposed from different environmental pollutants, including drugs and chemicals. The most common fish diseases, particularly in freshwater aquaria, include columnaris, gill disease, ick (ich), dropsy, tail and fin-rot, fungal infections, white spot disease, pop-eye,cloudy eye, swim bladder disease, lice and nematode worms infestation, water quality induced diseases, constipation, anorexia, chilodonella, ergasilus, tuberculosis, glugea, henneguya, hexamita, hole-in-the-head disease, injuries, leeches in aquaria, lymphocystis, marine velvet, and neon-tetra disease, etc. Antibiotics are frequently used to control fish diseases caused by bacteria, but there is an increasing risk of developing antibiotic resistant strains of bacteria. The non-specific immune functions such as bacteriolytic activity and leukocyte function of fish have been improved by some herbs. Plants have been used as traditional medicine since time immemorial to control bacterial, viral, fungal and other diseases.

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INTRODUCTION

Fishes not only play an important role in the demand of food for humans but they have also emerged as major model organisms for different biomedical researches. With increasing numbers of synthetic chemicals introduced into the environment each year, concerns remain regarding our understanding of the linkages between exposure to toxic agents and potential disease. Chemical contaminants of aquatic environments is of significant concern because although it is understood that aquatic systems serve as major conduits for distribution and deposition of many toxic agents, relatively few methods are available which provide sufficient sensitivity, accuracy and practicality necessary for assessment of chemical toxicity. As a consequence, new approaches are needed to improve the assessment of health risks associated with exposure to chemical contaminants in the aquatic environments[1].

Similar to other animals, fish can also suffer from various types of diseases. All fish carry pathogens and parasites. Usually this is at some cost to the fish. If the cost is sufficiently high, then the impacts can be characterized as a disease. However, disease in fish is not understood well. What is known about fish disease often relates to aquaria fish, and more recently, to farmed fish. Disease is a prime agent affecting fish mortality, especially when fish are young. Fish can limit the impacts of pathogens and parasites with behavioural or biochemical means, and such fish have reproductive advantages. Interacting factors result in low grade infection becoming fatal diseases. In particular, things that cause stress, such as natural droughts or pollution or predators, can precipitate outbreak of disease. Disease can also be particularly problematic when pathogens and parasites carried by introduced species affect native species. An introduced species may find invading easier if potential predators and competitors have been decimated by disease.

Pathogens which can cause fish diseases comprise : Viral infections, bacterial infections, fungal infections water mould infection, etc.[2]. Fish are exposed from different environmental pollutants, including drugs and chemicals. The fish can also be infected or damaged by different pathogens, microorganisms or parasites. The most common fish diseases, particularly in freshwater aquariums, include columnaris, gill disease, ick (ich), dropsy, tail and fin-rot, fungal infections, white spot disease, pop-eye, cloudy eye, swim bladder disease, lice and nematode worms infestation, water quality induced diseases, constipation, anorexia, chilodonella, ergasilus, tuberculosis, glugea, henneguya, hexamita, hole-in-the-head disease (head and lateral line erosion disease, lateral line erosion or lateral line disease) injuries, leeches in aquariums, lymphocystis, marine velvet, and neon-tetra disease, etc.[3]. The bacterial infections are considered the major cause of mortality in aquaculture. Among the common fish pathogenic bacteria, Streptococcus agalactiae, Lactococcus garvieae, Enterococcus faecalis (all Gram-positive), Aeromonas hydrophila and Yersinia ruckeri (both Gram-negative) cause infectious diseases[4].

A number of experiments and the use of drugs have been performed in fish. Therefore, fish may be used as model organism in the experimental pharmacology and toxicology[1]. Diseases in fish caused by bacteria are most widespread.

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A PRELIMINARY RESEARCH OF ICHTHYOFAUNAL DIVERSITY AND HABITAT ECOLOGY IN RIVER NARMADA JABALPUR REGION (M.P.)

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Edible, Fish diversity, Economy, Conservation.

ABSTARCT

The fish diversity of the Narmada River was studied from June to December 2022. In total, 23 species are discussed in this article. In total, 23 fish species from 16 genera and 10 families (less than 6 orders) were collected from four sampling stations along the Narmada River, revealing that the Cyprinidae family was the most diverse of all. The current study attempted to uncover the study and status of fish diversity in order to improve conservation action plans and modern management.

INTRODUCTION

India is one of the mega biodiversity hotspots, with long stretches of Eastern Ghat, the Greater Himalaya range on the northern plains, the Western Ghat on the west, and the central plateau region contributing to the world's biological resources. einsteinerupload of. As an important culturable animal in the economy of the majority of countries, fish is one of the most important aquatic vertebrates, providing itself as a rich protein source in human diet. Fish remains one of the most traded food commodities in the world, accounting for approximately 10% of total agricultural exports and 1% of global merchandise trade in value terms. Fish diversity has enormous economic and aesthetic value, and it plays a significant role in maintaining and supporting overall environmental health. Ichthyofaunal diversity refers to the number of fish species, alleles, or genotypes within a species of life form within a community or Piscean population (Burton et al., 1992). The Indian fish fauna includes 2662 native fin fish species from 1019 genera, 246 families from 42 orders, and 291 exotic fishes. The amount of living and non-living organic matter present in an ecosystem determines its species diversity. However, species diversity is determined less by the characteristics of a single ecosystem and more by the interaction of ecosystems. The genetic imprinting of various populations of lentic fish species is critical because freshwater ecosystems are critical components of their life-support systems by providing nursing grounds and feeding areas (Hammer et al., 1993). Furthermore, species diversity is a population property, whereas functional diversity is more strongly associated with ecosystem stability and stress, physical and chemical factors for determining population dynamics in the lentic ecosystem (Kar and Barbhuiya, 2004).

The Narmada River is a massive westward flowing river that is India's fifth largest river and the largest in Central-western India (Amritage, 2012). Due to habitat alteration or modification, climatic change, pollution, disturbed rainfall the life cycle of these fish species appears to be disrupted. Moreover introduced exotic species like, the Grass Carp and the Silver Carp proved catastrophic for native species due to competition for territory and tropic demands. The main causes are habitat destruction and defragmentation, water abstraction, industries and private use (Szollosi and Nagy, 2004; Richard and Rasmussen, 1999; Gibbs, 2000; Dawson et al., 2003) exotic species introduction (Copp et al., 2005), pollution (Lima-Junior et al., 2006) and global climate change impacts (Leveque et al., 2005; Mas-Marti et al., 2010). Freshwater fish are one of the most threatened taxonomic groups (Darwall and Vie, 2005) because of their high sensitivity to the quantitative and qualitative alteration of aquatic habits (Laffaille et al., 2005; Kang et al., 2009; Sarkar et al., 2008). The present analysis is an attempt to enlighten the current status of Ichthyofaunal community structure, abundance, diversity, distribution, richness, trophic ecology of the fishes, threats and to recommend conservation management measures for studied area.

METHODOLOGY

The Narmada basin is located in central India between 70° 20' E and 81° 45' E longitude and 21°20' N to 23°45' N latitude, with a drainage area of 98,796 square kilometres and a mean elevation of 760 metres. The current study was conducted from June to December 2022. Four study sites in Jabalpur, namely Bargi Dam, Gwarighat, Tilwaraghat, and Bhedaghat, were chosen for sampling, which was done at 15-day intervals using standard methods such as gill nets, cast nets, hooks and line, and some other local nets. The fish were caught using monofilament gill nets with mesh sizes ranging from 10 to 50 mm. For catching fish in shallow places, we also utilised cast nets with mesh diameters ranging from 10 to 25 mm. Depending on the size of the sample, the obtained fish samples were then preserved in formaldehyde at a concentration of 5–10%. With the aid of accessible taxonomy-based literature, all fish species were identified, mostly using Qureshi and Qureshi (1983), Talwar and Jhingran (1991), and Jayaram (1991).

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Possibility of lac production on *Cajanus cajan* (L.) Millsp.

Nisha Dehariya, Moni Thomas, Krishna Pateria, Rita Solanki and G Rawat

Abstract
Lac is a cash crop and India is to leading producer as well as exporter. Presently lac is commercially produced on host tree viz. *Butea monosperma, Zizyphus mauritiana* and *Schlecheria oleosa*, that are naturally occur in forests, wasteland and field bunds. Pigeonpea [*Cajanus cajan* (L.) Millsp.] is the most popular pulse crop grown in India and Africa. This pulse crop is good and annual host of lac insect. The present field experiment was carried out of basal and foliar nutrient management of *C. cajan*. The treatments were evaluated for experiment was survival of lac insects as it is crucial for lac production. Among the treatments Rhizobium, Phosphate Solubilizing Bacteria, Mycorrhiza and Humic Acid (Soil + Foliar application) was found the best with Mycorrhiza 56.51% percent.

Keywords: *Cajanus cajan*, nutrient management, lac production

Introduction
Lac insects are plant sap feeders (Sharma *et al*., 2006; Singh *et al*., 2009) [9, 10], thrive well only on certain plant species known as lac hosts (Kumar *et al*. 2002) [3]. Lac makes a significant contribution to the foreign exchange earnings of the country. Lac production has a potential for generating employment for both men and women. It plays in the economic upliftment of a country is that roughly 3 to 4 million tribal people (Ogle *et al*. and Kumar 2006) [7]. It is being carried by all types of farmers i.e. marginal, small farmers and big farmers. Lac production in India is mainly restricted to the states of Chhattisgarh, Jharkhand, Madhya Pradesh, West Bengal, Maharashtra, Orissa (Khobragade *et al*. 2012) [4]. Chhattisgarh state ranks first in the production of lac in India followed by Jharkhand (Jaiswal *et al*. 2011) [2]. Madhya Pradesh is the third largest producer of lac in the country (Thomas, 2010) [15]. Jharkhand contributes around 39 percent while West Bengal contributes nearly 7.5 percent of total lac produced in India. The major lac producing districts in Madhya Pradesh are Balaghat, Seoni, Mandla, Chhindwara, Dindori, Narsingpur and Hoshangabad and they contribute about 80 percent of the lac produced in the state. The Chhattisgarh state has established lac processing facilities. The state has a total of 28 lac processing units located at Pendra (2 units), Dhamtari (12), Sakti (3), Kanker (2), Kathgora (6), Rajnandgaon (1) and Raipur (2). Lac based products manufactured in Chhattisgarh are Seedlac, Button lac, Shellac, Bleached lac, Dewaxed Shellac, Lac dye and Aleuritic acid (Pal 2014) [18].
C. cajan is widely grown in India with 3.56 m ha, which contributes 76% of global area and 2.31 m tons of global production. *C. cajan* is also well adapted to the needs of poor small holder farmers in the semi-arid tropics, because compared to maize, an important cash crop in Malawi, pigeonpea production is less resource intensive (Dhanalakshmi *et al*. 2017) [1].
C. cajan provides an opportunity to enhance the lac production in Madhya Pradesh (Patidar *et al*. 2021) [8]. It is cultivated widely in different parts of state and can be better exploited for commercial production of lac in the region, on ber, palas and kusum in M.P. presently lac is produced. Pigeonpea was identified as a favourite host for lac insect long back in 1950's, (Zhenghong *et al*. 2021) [17] but on-farm lac production with pigeonpea has recently emerged as a result of increasing demand of lac from various parts of world (Thomas 2003) [19]. Pigeonpea has been reported as promising host in North-Eastern parts of India.

Methodology
The present field study was conducted during the year 2015-16 and 2016-17 in the village Khairi, Block Shahpura, District Jabalpur, Madhya Pradesh to evaluate the effect of biological

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Study of the Impact of Covid-19 on the Physical and Social Development of Children of Late Childhood with Reference to Jabalpur District

Mrs. Madhuri Ramteke

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ABSTRACT: A study in the Jabalpur district found that children younger than five years with mild to moderate COVID-19 have a high amount of SARS-CoV-2 viral RNA in their nasopharynx compared with older children and adults. The data indicates that girls were already more vulnerable compared to boys even before COVID-19. The evidence shows that during previous periods of disease outbreaks like Zika, SARS and Ebola, adolescent girls are more vulnerable due to lost earnings and education, increased vulnerability to gender-based violence, and unintended pregnancy. Children and adolescents are more vulnerable to mental health issues because they were unable to comprehend the entirety of a situation nor fully communicate their feelings to adults. This vulnerability was heightened as the pandemic disrupted their normal lives, deprived them of schooling and, concomitantly, opportunities for socialisation and physical activities.

The tools used to mitigate the threat of a pandemic such as COVID-19 may very well threaten child growth and development. These tools — such as social restrictions, shutdowns, and school closures — contribute to stress in parents and children and can become risk factors that threaten child growth and development and may compromise the Sustainable Development Goals. The studies reviewed suggest that epidemics can lead to high levels of stress in parents and children, which begin with concerns about children becoming infected. These studies describe several potential mental and emotional consequences of epidemics such as COVID-19, H1N1, AIDS, and Ebola: severe anxiety or depression among parents and acute stress disorder, post-traumatic stress, anxiety disorders, and depression among children. These data can be related to adverse childhood experiences and elevated risk of toxic stress.

KEYWORDS: social, childhood, mental, physical, adolescent, Covid-19, outbreaks

I. INTRODUCTION

The COVID-19 pandemic has imposed a number of changes on daily routines in Jabalpur, India needed to preserve individual health. Meanwhile, it is important to note that children around the world continue to grow and develop.[2] In this scenario, one priority challenge is identifying and discussing pandemic-related factors that can negatively affect children's growth and development and impair each child's full potential, in order to develop prevention strategies that enable a healthier and more productive population over both the short and long term. Under the appropriate care and support of adults who provide children with constant feelings of security and affection, the child's body reorganizes itself biochemically and quickly returns to levels of physiological functioning without further damage. However, when this support is non-existent or inadequate, a failure of the body's functions to return to basal level primarily impacts the cardiovascular and neurological systems, with consequent irreversible loss of connections in the infant brain, due to toxic stress.[1]

An increase in parental stress levels during a pandemic, a factor that directly interferes in children's quality of life, is therefore evident. Anxiety, excessive concern with cleanliness, excessive fear of falling ill or losing a loved one,[3] concern for the elderly, increased domestic accidents, mood disorders, anxiety disorder, panic, or obsessive-compulsive disorder, and post-traumatic stress are consequences that children and adolescents may experience, according to research into pandemic situations similar to the current one.[4]

Genetic developmental programming is strongly influenced by the environment. In an environment with social restrictions — where play and leisure activities are only possible within the home environment; where people wear masks and the learning of facial expressions, communication, and language is restricted;[8] and where demonstrating affection is discouraged by many — there is a tendency towards limitations in the formation of certain areas of the

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Preliminary Analysis of Water Quality for Fish Fauna in Sangram Sagar Pond

Dr. Manka Mishra
N.E.S. Science and Commerce College, Gorakhpur, Jabalpur, M.P.

Abstract

This study was conducted from Aug 2014 to June 2016 to tan fish fauna of Sangram Sagar pond. During the study ten fish species were identifies. These species were belonging to four orders including cypriniformes, perciformes, ophiocephaliformes and mastacembeliformes. The cyprinidae family dominant and some dominant family ophiocephalidae. The aim of the present study is to obtain knowledge for the fish fauna composition in sangram sagar pond.

Key Words :- Fish Fauna, Water Quality, Pond Water.

Introduction

Fish are indicator of ecological degradation of ecosystem as an anthropogenic intervention effect the structure, biology and physiology of fish fauna. Fish are cold blooded animals with a backbone (vertebrate), gillsh for breating under water and paired fins for swimming. They live under water and are dependent on water for dissolved oxygen, support, food and shelter fishes of pond. Fishes of pond are a major source of food from prehistoric time, all water resources needs to be reappraised specially in relation to the effects of pollution of planktons and fish cultivation.

Material and Methods

The study area was Sangram sagar a large lentic water body situated in Jabalpur, M.P. Sangram sagar is one of the prehistoric ponds of Jabalpur and is struggling for its existence. The sampling was done during the period of Aug 2014 to June 2016.

1. **Collection of fishes**

Fish samples from the selected sites were collected during monsoon, post monsoon, winter and summer season during the study period. Experimental fishing was carried out with the help of local fishermen. Different types of fish nets, i.e. gill net, cast net, drag net and scoop net were used including hooks and lines.

2. **Preservation of fish**

The fishes caught during the study were taken to the laboratory as soon as possible. The fishes were photographed for their morphological characters. The fishes were preserved in 10% formalin (freshly prepared) in glass jars according to their size. The fishes were labeled with serial number, common name, locality in the region, date of collection and other relevant information.

Identification of fishes

For the present study five sampling stations were fixed in the Sangram Sagar pond, Jabalpur. These stations were chosen based on the topography and catchment area, place of intense human interferences and the entry of sludge and sewage water in the pond. The identification of the fishes was done on the basis of colour pattern, specific spots or marks on the surface of the body, shape of the body, the structure of various fins, mouth shapes, etc. The taxonomic keys given by Day (1986), Kumar and Tembhre (1997) and Kumar and Tembhre (2010) were used.

Result & Discussion

During my study period fish diversity observed belonged to more than 10 fish species from four fish families in Sangram Sagar each. Out of these, Cyprinidae was the abundant fish family. The fish are divided into commercially important like Labeo rohita, Catla Catla, Cirrhinus mrigala; locally important species like Tor spp., Channa spp., Mystus spp. etc. and

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Research

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Assessment of Nutritional Status of Children Under Five Years in Rural Areas of Jabalpur, Madhya Pradesh

Samiha Tiwari[1,*], Nandita Sarkar[2], S.S. Sandhu[3]

Abstract

Background and Aim: *Malnutrition and growth impairment are the common and major public health problem among children in Madhya Pradesh.* ***Materials and Methods:*** *Present study was conducted in different rural areas of Jabalpur district. Total 120 children of age between 0 and 5 years were evaluated. To assess malnutrition among children, Anthropometric measurements, clinical examination and dietary assessment were calculated. Data were collected through pre-designed performa.* ***Results:*** *Anthropometric results showed that 25.5% children were mild malnourished, 13.5% were moderate malnourished and 7.5% were severely malnourished. According to the clinical examination, 22.64% of children had clinical signs of malnutrition in various categories. Dietary assessment showed that 34.05% children were deficient in major five nutrients.* ***Conclusion:*** *The study revealed that the most common type of growth impairment in children among five years of age are stunting and wasting.*

Keywords: Malnutrition, assessment, nutritional status, anthropometric, deficient

INTRODUCTION

Nutritional status is the condition of health of an individual as influenced by nutritional intake and utilization in body. Malnutrition is major public health problem in developing countries. Freedom from hunger and malnutrition is a basic human right and their alleviation is fundamental prerequisite for human and national development, usually referred to as silent emergency [1]. It is still considered as one of the major public health problems in many developing countries, affecting more than 50% of children under five years of age in developing countries in which malnutrition is an impairment of health resulting from deficiency of calories and more essential nutrients.

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In children, protein and calorie deficient diet results underweight, wasting and lower resistance to infection, stunted growth and impaired cognitive development and learning [1].

Nutrition plays a vital role as protein inadequate nutrition during childhood may lead to malnutrition, growth retardation, reduced work capacity and social development [2]. Child's nutritional level is an important means of gauging the condition of the country's children. It is estimated that on children third of death among children five are attributable to under-nutrition. Under-nutrition not only puts children at greater risk of disease vulnerability, it also adversely effects their physical, cognitive and mental development [3]. The situation of child malnutrition is also grave in Madhya Pradesh

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Survival of *Kerria lacca* (Kerr) on pigeon pea

Nisha Dehariya, Moni Thomas, Krishna Pateria and Rita Solanki

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Abstract
Number of live lac insects (*Kerria lacca*) on the host plant till the harvest of lac crop, decides the lac yield. Survival of *K. lacca* is therefore one of the most important factors for higher lac productivity. The present study on the survival of *K. lacca* on pigeon pea was carried with eight treatments which was replicated thrice. Apart from the basal dose of DAP and MoP, biofertilizers and humic acid were also applied as per the treatments for growing pigeon pea (TJT-501). Soil, foilar and soil + foliar applications were the three types of treatments applications. The mean number of live lac insects (MNL) was maximum 69.81 to 82.29 per 2.5 cm² at 30 days after Brood lac inoculation (BLI). It declined in linear trend till the harvest of lac crop. At 195 days after BLI the MNL varied BLI from 34.50 to 40.85 per 2.5cm². It was highest in the *C. cajan* with soil applications of VAM, DAP, MoP and FYM.

Keywords: Lac insects, biofertilizers, *C. cajan*, micronutrient, treatment

Introduction
Lac is a minor forest produce (Thomas 2003, Sharma *et al*. 2006) [15, 13]. It is an important source of cash to the tribal communities and forest dependants in central and eastern part of India (Jaiswal *et al*. 2020, Namdev *et al*. 2015, Shah *et al*. 2015) [2, 7, 12]. India is the largest producer of lac in the world (Pal 2013, Yogi *et al*. 2015) [8, 17], however, the annual production of lac is declining steeply. Lac production has economically and ecological impact at the local level (Kakade *et al*. 2020) [4]. In this context, the enterprise cannot be over looked. Majority of the forest dependant are migrating to urban areas, the forest area is shrinking, as well as women collecting fuel wood from forest are also it. Thus, promotion of lac on alternative hosts plants is essentially important approach. Pigeon pea [*Cajanus cajan* (L.) Millsp.] has proved to be a good host of lac insects in India. (Thomas 2003, Vajpayee *et al* 2019, Patidar *et al*. 2019) [15, 16] In M.P. *C. cajan* is cultivated in India 3.56 m ha (Dhanalakshmi *et al*. 2017) and the state is also the third largest producer of lac in the country (Shah *et al* 2015) [12].
C. cajan being an important pulse crop in MP, lac production on it is a good option. Lac insect is a phloem feeder (Sharma *et al*. 2006, Singh *et al*. 2017, Pal 2009, Mohanta *et al*. 2014) [13, 14, 9, 5] and phloem feeders are known to reduce the yield of numerous crops. Therefore, nutrient management of *C. cajan* is very important, if lac insect is to be reared on it. In this background the present field study was conducted.

Material and Methods
The present field study was conducted during the year 2015-16 in the village Khairi, Block Shahpura, District Jabalpur, Madhya Pradesh to evaluate the effect of biological products *viz*. (PSB, Rhizobium, Mycorrhiza and Humic acid on *C. cajan* on plants for Baishakhi lac production. Geographically the village is located between 21°19' to 22°24' north latitude and 79°31' to 81°31' east longitude. The experiment in Randomized Block Design (RBD) with eight treatments and three replications was laid in the month of July 2015.
The field trial was conducted on TJT-501 variety of *C. cajan* obtained from Jawaharlal Nehru Krishi Vishwa Vidyalaya, Jabalpur Madhya Pradesh.

Treatments
The experiment had following eight treatments in three replication.

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A Comparative Study on Dietary Behaviour of Working and Non–Working Women

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Abstract :- The present study was conducted to compare the dietary behaviour of working and non-working women. For the study total number of sample was 300 women who were selected randomly from Jabalpur District. Out of 300 women 150 were working and 150 were non-working women. The working women were categorized as- high-school teachers, professors and office workers. The non-working women were those whose spouses were in the same professions. Survey method was used to collect the data. Dietary Behavior Questionnaire was used by the researcher to collect the relevant data from the selected samples. Chi-square was used for statistical analysis. The result of the study revealed that the dietary pattern of working and non-working women was not affected by nature of work. More working women gave preference to seasonal vegetables and non-working women to seasonal fruits. Comparatively more working women were health conscious as they mostly applied shallow fry method of cooking than non-working women. Most of them had knowledge about balanced diet and more number of working women consumed milk regularly as a health supplement.

Keywords :- Working and Non-Working Women, Dietary Behavior.

Introduction :- "A sound mind in a sound body" If the health of an individual is sound, his mind will function in a better way. A good diet is one of the factors to obtain a sound body. Diet plays an important role to pass a healthy life. A popular saying "we are what we eat" is of course not an exaggeration if interpreted in concern of human health. A healthy diet is not the need of a single person but is needed for everyone to pass a healthy life. Especially women are mostly needed because they are often vulnerable to mal-nutrition as they face many physiological changes in their whole life. There are some crucial stages in their life and to face them extra care and good nutrition is needed. They have been viewed as a pivot around which the family revolves and somewhere the health of the family members depends on women's health. That's why the nutritional status of women is a sensitive indicator of community health and nutrition. Except other reasons diet is also one of the factors.

In our Indian society, it is believed that the role of men is for earning and the role of women is for reproduction and home making. It is supposed that home should be the primary responsibility of a woman. Their duties are related to maintaining home within the four walls. Perhaps this is why she is called housewife. It is believed that taking care of children and shaping their family are the major responsibilities of women. Cooking food and satisfying domestic needs of family members should be the priorities of women. From centuries they have been devoted to their jobs and shouldering all their responsibilities as they feel that they are made and are born for this only. Most of all women lived in the four walls of the house and fulfilled their duties as in Indian tradition only men are

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A Comparative Study on Health Awareness of Working and Non-Working Women

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Abstract
The present study was conducted to compare the Health Awareness of working and non-working women. For the study total number of sample was 300 women who were selected randomly from Jabalpur District. Out of 300 women 150 were working and 150 were non-working women. The working women were categorized as- high-school teachers, professors and office workers. The non-working women were those whose spouses were in the same professions. Survey method was used to collect the data. Health Awareness Questionnaire was used by the researcher to collect the relevant data from the selected sample. Chi-square was used for statistical analysis. It was found that there was no effect of work status on food pattern regulation of dietitian. More working women followed yearly/half-yearly routine checkups than non-working women. In comparison to non-working women most of the working women changed their lifestyle on the advice of doctor if they have any disease. Due to lack of time majority of non-working women did not give time for their own health while working women seldom do exercise.
Keywords: Working and Non-Working Women, Health Awareness.

Introduction:

The present scientific and technological developments have made life more comfortable though it is often said that it has become busy and more complex. Today a large number of women are participating in labor force through the generation of income. In our Indian society, it is believed the role of men is for earning and the role of women is for reproduction and home making. But today, in the era of scientific and technical development where on one hand the life has become easier, on the other hand cost of living has been increased. Consequently, only a single man's income is not sufficient for meeting the needs of the family. To fulfill the financial needs of the family women have to come forward with men to support the family. It is also true that sometimes only for being self dependent or to fulfill their ambitions and to make their own identity, women involve in work force. On one side involvement of women in any employment plays a positive role, on the other side exerts negative impact on their health. Bearing dual responsibilities of household work and paid work they lose their most precious thing which is health that will never come back. Even the women who stay at home are busy in household works. Whether they do not go outside, their tight schedule of daily routine hardly allows them to take rest, to take proper food and to maintain their own health.

Lalitha V., Bharathidasan D. (2013) stated that working women were not taking good care of their health. They accepted that they could not do exercise regularly because of lack of time and house work load. Few women skipped their breakfast. It showed that if they would be motivated and suggested they would live healthy life in future. Bathla Shikha et al. (2018) found that rural women consumed fewer amounts of serials, pulses, green leafy vegetables and milk products than SDI where as intake of fats and oil was more than SDI by ICMR. Consequently, suffering from some health problems like- tiredness, loss of appetite, fever, headache, etc.

The importance of health is not only for women but for all human beings. But often it is seen that the health of the family is affected by the health of the women. So, for the good health of the family women need to be fit and healthy. Health is a term that is not only related to the absence of disease or with healthy functions of body parts or having positive thoughts. health is basically

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There is no doubt that lecturer/ Asst. Professor/ Professor works under the system run by administrative body of college and university to U.G.C. hence, it is not exaggerate that such administrative committee should be able to facilitate and offer boosting support to both teachers and pupils' need. Honestly to note that administrative bodies provide teachers opportunities to develop skills through various courses, workshop on teaching planning. However, it expects that special fund; various kinds of digital tools, remedial teaching training course and special teaching apps should be provided to teachers.

References:

01 http://en.wikipedia.org

02 N. Krishnaswamy, S.K. Verma, M. Nagarajan, Modern Applied Linguistics, Macmillan India Limited, Chenni, 1992,p.208.

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06

A Study on Suitability of Masks Among Different Age Groups During Covid-19 Pandemic

Dr. REENA BHAIRAM

Dr. KUMUD DWIVEDI

Mr. HEMANT BHAIRAM

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ABSTRACT:

The advent of novel coronavirus or COVID-19 has shook the world in so many ways. Life at all levels is operating in isolation from the entire outer world. In the quest to fight against this server infection, the WHO has declared three safeguards, which are: washing hands frequently, maintaining social distancing and most importantly, wearing masks in every public place. The safeguard which is resourceful is mask and across the world, its use and suitability has been observed in various patterns.

This paper considers observations from a small concentration of geographical location to study and analyze use patterns amongst the general public as their response to active spread of COVID-19. Various age groups in the society have responded to the transition in lives from pre-covid to the present with vivid trends in choice and comfort of wearing masks. This paper shall depict the thought process of both observers and respondents to interrelate and understand how preferences of masks has been at levels of general population.

KEYWORDS: Novel Corona Virus, COVID-19, Isolation, Safeguard, Geographical, Trends,

INTRODUCTION:

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Role of NGOs in Rural Development

Dr. Reena Bhalram
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Mr. Hemant Bhalram
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Abstract :- This paper attempts to illustrate the contribution of NGOs towards rural development. NGOs are conducting many activities and also running many programs for the development of the rural society so that people can become empowered and get benefited with the development programs.

This paper reviews some of the roles, functions and programs of NGOs, such as Agricultural Programmes, Healthcare Programmes, Human Resource Development Programmes, Community Development Programmes, Environment Protection Programmes, Education and Self-Employment programmes, Empowerment programmes for women, Animal Resources Programmes, Economic Development programmes, Capacity Building program and Self Employment. NGOs, through capacity building programme, develop people's capacities such as ability, skill and knowledge of mobilizing resources, planning and evaluating community initiation and solving problems to gain the mastery over their lives. Furthermore, NGOs make people to be self-reliant as they are able to discover their own potential and rely on their own resources. In short, this paper demonstrates all these roles, programs and activities of NGOs that could contribute towards the Rural Development

Key words :- NGO`s, Rural Development, Society, Programs Activities

Introduction :- NGOs are organizations which run free from the government control and which work for the welfare of societies. NGOs are the mediator between society and government. They are the Non- profitable organizations. They are not affiliated with any Government organisation. Their main aim is the development and progress of rural areas and to make them aware about the social and legal issues along with new policies. NGOs also support cultural, religious, social and educational growth with environment protection and rural social development. NGO is a local, national, or international group, with a legally established constitution, a clear purpose and visible activities, with a governing body which has the authority to speak for its members. NGOs take up and execute projects to promote welfare of the community they work with. NGOs work on their own terms and principles. In NGOs, anyone can take membership and become its member. Interested people can access membership by their own will and quit whenever they want to. NGOs do not receive any financial help from the government; some work on their own and some take finance from those who are willing to do good for the society.

Definition – WORLD BANK "The diversity of NGOs strains any simple definition. They include many groups and institutions that are entirely or largely independent of government and that have primarily humanitarian or cooperative rather than commercial objectives. They are private agencies in industrial countries that support international development, indigenous groups organized regionally or nationally and member-groups in villages. NGOs include charitable and religious associations that mobilize private funds for development, distribute food and family planning services and promote community organization. They also include independent cooperatives, community associations, water-user societies, women's groups and pastoral associations. Citizen Groups that raise awareness and influence policy are also NGOs"

The World Bank defines NGOSs as

Role of Women in Freedom Movement

Dr. Reena Bhalram
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Mr. Hemant Bhalram
Principal, Gurukul International School, Janjgir – CG

Abstract :- The contribution of women in Indian freedom struggle is commendable. In earlier times, women are considered for doing household chores and at the same time they are never been thought of giving a challenging fight to male counterpart, but they showed that not only they have challenged male and fought war side by side with male counterpart, but also outwitted male in many of the themes with the quality of sacrifice, selflessness and bravery. Many women in history like Rani Lakshmi Bai, Avantibai, Rani Durgawati and others have shown that determination and true dedication towards the goal are the key towards success.

It was not easy for the women to take lead in male dominating society, but they have falsified society by performing their roles and responsibility incredibly well.

Introduction :- Before independence, women were not given equal status as of men. The major cause of this was the effect of male dominating society. The women from the very beginning is considered for doing household works and these duties assigned to them as their natural work. They were not even allowed to express their views, ideas and suggestions freely. Moreover, they were forced to follow the rules of purdah system, child marriage etc. In addition to it, male dominating society showed cruelty by implementing/imposing rules of Sati Pratha, female foeticide, female infanticide and polygamy.

Many social reformers like Raja Ram Mohan Rai, Iswar Chandra Vidyasagar etc fought towards upbringing of equal status for women in society. But it was women who have mastered their arts and skills and came up with their superior performance. Today, we cannot think of any struggle in the history either of India or World where women have not contributed or which became successful without the contribution of women. Even women like Rosa Parks have fought courageously against the Apartheid system in Africa. There are many examples in India as well as in the world where women have not only fought their war of independence successfully but they have come up outwitting and defeating their own limits.

Keywords :- Freedom Movement, Role, British, Independence, Indian, Women.

Objective of Paper:

1. To study the freedom movement in India.
2. To know the role played by women freedom fighter in freedom movement.
3. To know about different women freedom fighter

India's Freedom Struggle :-

1. The first war of Independence (1857-58)
2. Swadeshi Movement (1905)
3. Jallianwala Bagh Massacre (1919)
4. Non-cooperation movement (1920)
5. Poorna Swaraj (1929)
6. The Dandi March (1930)
7. The Quit India Movement (1942)

Women Participation for the freedom movement before 1857 :- Women's participation in freedom movement started early 1817. Bhima Bia Holkar, one of the well-known names fought against the British Colonel Malcolm and defeated him. Like historical woman Bhima Bai Holkar many women named Rani Channama of Kittar, Rani Begam Hazart Mahal of Avadh fought against the British East India Company.

21-A

A Study on Awareness of E-Tutorials and Digital Library among College Going Students

[25]★ Dr. Reena Bhairam

Abstract

E-Tutorials and digital library are the tools for developing skills among college going Students to function efficiently in the knowledge society and also improve the teaching and learning method via a computer network such as the Internet. E-Tutorials and digital library has a very important role to play in today's teaching-learning processes and the overall learning environment. The study aims to investigate the awareness and understanding of E-Tutorials and digital library among college going students. For the study, data was collected from total 150 college going Students via self-structured questionnaire method. The study concluded that all of the respondents are connected with the E-Tutorials and digital library and a maximum of them think that there is a good impact on the learning environment on the student's academic purpose.

Keywords:- E-Tutorials, Digital library, Online Learning, E-PG Pathashala, E-learning

Introduction:-Libraries have long served vital roles in learning Digital libraries have the potential to supply unexampled resources for supporting E-learning. Digital library plays a major role in helping, effective E-learning method because it will store and manage giant/massive amount of digital content with higher network and storage technology at reasonable prices. The Digital library to support e-learning with resources network, designed to fulfil the requirement of the learners, in each individual and co-operative settings, made to modify the dynamic use of a broad array of materials for learning primarily in digital format and managed actively to access anytime and at anyplace to quality collection and services at our doors. It has the potential to considerably modification of the elemental aspects of the schoolroom in which it might have a great impact on teaching & learning. An E- tutorial is a self-study activity framed to teach a specific learning outcome. There are two types of E- tutorial.

Recorded E-tutorials are video or screen cast recordings, typically of a presenter presenting information and ideas or giving a demonstration.

Interactive E-tutorials are a structured combination of web pages. Web pages can contain any combination of text, images, audio, video, questions and other activities.

The Government of India has taken some steps towards the implementation of E-learning through portals such as "E-PG pathshala".E-PG Pathshala is an initiative of the MHRD under its National Mission on Education through ICT (NME-ICT) being executed by the UGC. The content and its quality being the key component of education system, high quality, curriculum-based, interactive e-content in 70 subjects

Review of Literature:-Yalan et al (2014), examined quality of digital library which define as the quality of information quality of system and overall service quality of digital library. The compression of user's perceptions towards virtual communities and digital libraries have been done understand the actual nature of e quality perceived by the users. Based on the user's perception study found that digital libraries provide better information, system and service quality than virtual communities.

Objective of The Study:-

- To study the awareness of E-Tutorials and digital library among college going Students.
- To study and to understand using E-Tutorials and digital library among college going Students.
- To study the frequency of use of E-Tutorials and digital library among college going Students.

★ **Assistant Professor, Govt M.H. College Of Home Science And Science For Women's (Autonomous), Jabalpur (M.P.) India.**

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Empowerment of Tribal Women in Madhya Pradesh

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Introduction :- Empowerment of Trible women is one of the central issues in the process of development all over the world. It is multifaceted, multidimensional and multi-layered concept. Women empowerment is a process in which women gain greater share of control over material, human and intellectual resources as well as control over decision making in the home community, society and nation, however problems in our society. On the parts of the trible women too, due to sociological or cultural reasons, they are unable or un willing to came out of their cliches. of-course ignorance and illiteracy plays a major role in hampering the empowerment of trible women.

The trible communities in India are enormously divers and heterogenous. There are wide ranging diversities among them in respect of languages spoken, size of population and mode livelihood. The number of, communities that find their place in the list of the schedule of the Indian Constitution is reflection of their diversity. The government of India, in its draft National Trible policy. 2006 records 698 Schedule Tribes in India. As per the census of India 2011 the number of individual groups notified as Schedule Tribes is 705. Tribes of Madhya Pradesh have preserved their culture is distinguished by the composite remain of the SCYTHAIN and DRAVIDIAN culture. There are 46 tribes recognized Schedule Tribes in Madhya Pradesh. At district level Schedule Tribes have returned the highest proportion in JHABUA district (86.8%) followed by BARWANI (67%), DINDORI (64.5%) and MANDLA (57.2%) district. BHIND district preceded by MURENA and DATIYA has the lowest proportion of Schedule Tribes (0.5%).

Women in society :- Women in trible society plays vital role in their social, culture, economic and religious ways of life and are considered as an economic asset in their society. But they are still lagging far behind in the difference walks of life like education. Employment good health and economic empowerment etc. Though human capabilities approach to the development process. The human capabilities include social, economic, cultural and political capabilities of the human beings.

Status of Trible women :- The status of trible women in a society is significant reflection of the level of society justice in that society. The women's status is often described in terms of their level of income, employment, education, health and fertility as well as their roles within the family, the community and the society. In Madhya Pradesh trible community the role of women is substantial and crucial. They constitute about half of the total population but in trible society women are more important than their social groups, because they work harder and the family economy and management depend on them. Even after industriallization and the resultant commercialization swamped the trible economy and management depends on them.

Role of Trible women in decison making :- The power to take decison is extremely important from the view point of empowerment because it is often seen that their voice is not properly listened. The decisons making power of women should not be ignored. The women participation in decison making was found medium level, further the decison of the Trible form women significantly and positively correlated with age and family size. The education and experience in agriculture are positively influence the decisons making behaviour of the Trible women. The emphasis in education of

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Impact of Social Media on Self-Esteem of Adolescent Students of Tribal Area, Bicchua-Tehsil, Chhindwara-District

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ABSTRACT: Internet is a very essential element of life which cannot be unheeded. There is a surely a drastic change in today life, today is the age of digital technology. The world has been uniform by the World Wide Web (www). Today we live in a country where contacting someone, sharing our feelings as well as our thoughts, opinions is just a click away and the main contribution of this digital technology is Social media Revolution . Social Networking sites are now available to satisfy one and distant social needs. These networking sites have made it possible for the people to contact the friends who lives in a very distant places and also help us to share pictures, videos and audioand with our near ones. Today it is very difficult to find out the teenager without having account on any social networking site. As they use these sites to keep in touch with friends, colleagues, relatives and nears and dears in order to express their feelings, views and opinions and also academic related problems. Internet is used for so many purposes viz, Commercial purpose, Health purpose, Educational purpose by a large community but unfortunately we have a huge community including majority of youth and teenagers who use Internet for only social networking sites. Adolescence and young adulthood are crucial stage in development where youth begin to form their own identity and create meaningful relationships but the usage of social media can impact on area of their development.

KEYWORDS: digital, technology, educational, adolescence, social media.

I. INTRODUCTION

Chhindwara district is one of the major districts of Madhya Pradesh state of India, and Chhindwara town is the district headquarters. Chhindwara is the largest district in Madhya Pradesh with an area of 11,815 square km. The district is part of Jabalpur division.

The name Chhindwara has been derived from the word Chhind, the local name of a tree found commonly in the district. Chhindwara district was formed on 1 November 1956.

It is on the southwest region of the Satpura Range. It is spread from 21.28 to 22.49 deg. North (latitude) and 78.40 to 79.24 deg. East (longitude) and spread over an area of 11,815 km². This district is bound by the plains of Nagpur district (in Maharashtra State) on the south, Hoshangabad and Narsinghpur districts on the north, Betul district on the west and Seoni district on the east[1]

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बेरोजगार एवं रोजगार युक्त युवाओ के आत्मविश्वास एवं आत्मसम्मान का अध्ययन- मंडला जिले के संदर्भ में

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सार

मंडला. प्रदेश के शहरी युवा बेरोजगारों को मनपसंद क्षेत्र में रोजगार की गारंटी देने के उद्देश्य से युवा स्वाभिमान योजना लागू की गई है। योजना के जरिए वर्ष 2019 की स्थिति में प्रदेश में युवाओं की संभावित संख्या 6.50 लाख को आने वाले समय में आत्म-निर्भर बनाने के लिए व्यावसायिक कौशल प्रशिक्षण दिया जाएगा। योजना में अभी तक 79 हजार 400 युवाओं ने पंजीयन करवा लिया है। योजना में जीवन-यापन की तात्कालिक आवश्यकता को पूरा करने के लिए वर्ष में 100 दिन तक का रोजगार देना शामिल है।

युवा नगरीय निकायों में निवासरत हो तथा उसकी आयु 21-30 वर्ष होनी चाहिए। परिवार की समस्त स्त्रोतों से वार्षिक आय 2 लाख रुपए से कम होनी चाहिए। पात्र युवक-युवती को जो कार्य सौंपा जाएगा, उस संबंध में पहले 10 दिन में निकाय द्वारा उस कार्य का प्रशिक्षण दिया जाएगा।

योजना में पात्र युवाओं को एक वर्ष में 100 दिनों के लिए, 4000 रुपए प्रतिमाह स्टाइपेंड पर नगरीय निकायों में अस्थाई-रोजगार दिया जाएगा। स्टाइपेंड प्रत्येक माह के अंत में युवक-युवती के बैंक खाते में किया जाएगा। कार्य की अवधि एक माह से कम होने पर समानुपातिक दर से भुगतान किया जाएगा। युवाओं का 90 दिनों तक 4 घंटे नगरीय निकाय द्वारा आवंटित विहित कार्य में नियोजन एवं 4 घंटे कौशल एवं तकनीकी विकास का प्रशिक्षण दिया जाएगा। इसमें न्यूनतम उपस्थिति होने पर ही अभ्यर्थी को कार्य के समानुपातिक भुगतान की अर्हता होगी। भुगतान की समस्त सूचनाएं अभ्यर्थी को सतत प्रेषित की जाएंगी। कार्य में 33 प्रतिशत एवं प्रशिक्षण में 70 प्रतिशत न्यूनतम उपस्थिति होने पर ही अभ्यर्थी स्टाइपेंड भुगतान के लिए पात्र होगा।

योजना के क्रियान्वयन के लिए संबंधित नगरीय निकाय (नगर निगम, नगर पलिका, नगर परिषद) नोडल एजेन्सी के रूप में कार्य करेगा। नगरीय निकाय में पंजीयन के दौरान प्रत्येक पात्र युवा से दो विकल्प लिए जाएंगे। पहला निकाय द्वारा चिन्हांकित कार्यों में से कार्य के विकल्प, जैसे-सम्पत्ति कर की वसूली, जल कर की वसूली, सम्पत्ति कर के लिए सर्वे, निर्माण कार्यों में श्रमिक के रूप में कार्य आदि। दूसरा कौशल प्रशिक्षण के लिए क्षेत्र का चयन जिसमें कॅरियर बनाने की रुचि हो।

अभ्यर्थी वेबसाइट पर जाकर योजना का लाभ लेने के लिए पंजीयन करा सकते हैं। पंजीयन में अभ्यर्थी को अपनी पसंद के तीन नगरीय निकाय, तीन कार्य एवं तीन कौशल प्रशिक्षण ट्रेड प्राथमिकता क्रम में चयन के विकल्प उपलब्ध होंगे। पंजीयन के समय अभ्यर्थी द्वारा निवास, आय एवं मनरेगा जॉब कार्डधारी न होने का स्व-प्रमाणन किया जाना अनिवार्य होगा। पात्र अभ्यर्थी युवा पोर्टल पर पंजीयन कर अभिस्वीकृति-पत्र का प्रिन्ट आउट प्राप्त कर लें। पोर्टल द्वारा उन्हें 'पहले-आओ, पहले-पाओ' आधारित कार्य आवंटन तथा चयनित नगरीय निकाय पर प्रत्यक्ष रूप से उनकी ऑनबोर्डिंग की जाएगी। इसकी पूर्व सूचना उन्हें उनके मोबाइल ऐप पर दी जाएगी। ऑनबोर्डिंग के समय नगरीय निकाय के नोडल अधिकारी उनका आधार-आधारित-सत्यापन तथा निकाय स्तरीय दस दिवसीय प्रशिक्षण संचालित करेंगे।

परिचय

मंडला ज़िला भारत के मध्य प्रदेश राज्य का एक ज़िला है। ज़िले का मुख्यालय मंडला है। ज़िला सतपुड़ा पहाड़ियों में स्थित है। नर्मदा नदी उत्तर-पश्चिम बहती हुई इस जिले को रीवा से अलग करती है। नर्मदा की सहायक बंजार नदी की घाटी में जिले का सबसे अधिक उपजाऊ भाग पड़ता है, जिसे 'हवेली' कहते हैं। हवेली के दक्षिण बंजार की घाटी जंगलों से ढकी हुई हैं। सर्वप्रमुख इमारती पेड़ साल हैं। बाँस, टीक और हरड़ अन्य उल्लेखनीय वृक्ष हैं। नदियों की घाटियों में धान, गेहूँ और तिलहन की उपज होती है। लाख उत्पादन, लकड़ी चीरना, पान उगाना, पशुपालन, चटाई और रस्सियों का निर्माण यहाँ के लोगों के उद्यम हैं। यहाँ के 60 प्रतिशत निवासी गौंड़ जनजाति के हैं। यहाँ मैंगनीज और धातु के निक्षेप हैं। मंडला नगर, नर्मदा नदी के किनारे जबलपुर से 45 मील दक्षिण-

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बैगा जनजाति की महिलाओं की उनके सामाजिक–सांस्कृतिक एवँ आर्थिक विकास में भूमिका : बालाघाट जिले के विशेष सन्दर्भ में

श्रीमती माधुरी रामटेके
सहायक आचार्य, गृह विज्ञान, मानव विकास विभाग, शा.सो.ह. गृहविज्ञान एवँ विज्ञान महिला महाविद्यालय, जबलपुर
जय कुमार रामटेके
स्नातकोत्तर छात्र, दिल्ली विश्वविद्यालय

सारांश :– संस्कृति के उद्गम काल से ही महिलाएं, पुरुषों के साथ कंधे से कंधा मिलाकर कार्य करती आयी हैं। चाहे यह आदिमानव युग में साथ में शिकार करने की कला हो या नवपाषाण युग में कृषि कार्य करने का कौशल, महिलाओं ने सदैव ही स्वयं को पुरुषों के बराबर सिद्ध किया है और इसीलिए ही हमें विश्व की लगभग सभी पुरातन संस्कृतियों में 'मातृदेवी' की उपासना के साक्ष्य दिखाई देते हैं, साथ ही हम लगभग सभी पूजनीय देवताओं के साथ देवियों को भी उनकी पूरक के रूप में देखते हैं, जो कि इस बात को प्रमाणित करता है कि महिला और पुरुष के परस्पर समन्वय से ही समाज सुचारू रूप से संचालित हो सकता है। जनजातीय समाज चूँकि प्रारम्भिक मानव समाजों के ही समान रहन–सहन प्रदर्शित करते हैं, अतः हम अधिकांश जनजातीय समाजों में महिला एवं पुरुषों में समानता, परस्पर समन्वय तथा सामजिक–आर्थिक गतिविधियों में बराबर की भूमिका देखते हैं। प्रस्तुत शोधकार्य मध्यप्रदेश की बैगा जनजाति के सामाजिक–आर्थिक जीवन में महिलाओं की भूमिका पर प्रकाश डालता है। बैगा महिलाएं जंगल से लकड़ियों के विक्रय कर जीविकोपार्जन करने के साथ–साथ अपने शरीर में गोदना धारण कर अपने सांस्कृतिक तत्वों को भली भाँति सहेज कर रखती हैं और पुरुषों के समान ही सामाजिक–आर्थिक गतिविधियों में अपनी सहभागिता प्रस्तुत करती हैं।

मुख्य शब्द :– महिलाओं की स्थिति, बैगा जनजाति, सामाजिक–आर्थिक विकास

प्रस्तावना :– महिलाओं की स्थिति प्रत्येक समाजों में भिन्न–भिन्न देखी जा सकती है। किसी भी समाज में व्यक्ति की स्थिति उस समाज विशेष के सांस्कृतिक मूल्यों के अनुरूप ही तय की जाती है और इसी प्रकार किसी भी समाज में महिलाओं की स्थिति को निर्धारित करने में भी सांस्कृतिक मूल्य एक महत्वपूर्ण भूमिका निभाते हैं। मानव सभ्यता के शैशवकाल से ही महिलाएँ पुरुषों के समकक्ष सभी क्रियाकलापों में अपनी भागीदारी दर्शाती आई हैं। इस बात को नकारा नहीं जा सकता कि विश्व की अधिकांश मानव सभ्यताएँ अपने प्रारम्भिक काल में मातृसत्तात्मक ही रही थीं, और इसीलिए ही हमें विश्व की लगभग सभी पुरातन संस्कृतियों में 'मातृदेवी' की उपासना के साक्ष्य दिखाई देते हैं, जिसकी पुष्टि यूरोप के अधिकांश भागों से प्राप्त पैलियोलिथिक काल की 'वीनस' की प्रतिमाओं से होती है– वैज्ञानिकों ने अपने शोध से यह सिद्ध किया है कि आदिमानव काल में शिकार करने हेतु प्रयुक्त होने वाली "बिग गेम हंटिंग" में महिलाएँ एवं पुरुष दोनों ही सहभागी होते थे, इसके अलावा नवपाषाण काल में जब मानव ने कृषि कार्य करना प्रारम्भ किया तब महिलाएँ भी समान रूप से हिस्सा लिया करती थीं। साथ ही हम लगभग सभी समाजों में पूजनीय देवताओं के साथ देवियों को भी उनकी पूरक के रूप में देखते हैं, जो कि इस बात को प्रमाणित करता है कि महिला और पुरुष के परस्पर समन्वय से ही समाज सुचारू रूप से संचालित हो सकता है। आम तौर पर महिलाएँ किसी भी परिवार में पत्नी, माता पुत्री इत्यादि की भूमिका में होती है, किंतु इसके अलावा ये समाज का एक हिस्सा होने के साथ साथ श्रम शक्ति के रूप में भी अपनी सहभागिता दर्शाती हैं, इस प्रकार महिलाएँ दोहरी भूमिका निभाती हैं य विशेषतः जनजातीय समाजों में महिलाओं को आर्थिक गतिविधियों के संचालन में एक महत्वपूर्ण किरदार के रूप में देखा जा सकता है। चूँकि जनजातीय समाज प्रारम्भिक मानव समाजों के ही समान रहन–सहन प्रदर्शित करते हैं, अतः अधिकांश जनजातीय समाजों में महिला एवं पुरुषों में समानता, परस्पर समन्वय तथा सामजिक–आर्थिक गतिविधियों में बराबरी दिखाई देती है। जनजातीय महिलाएँ श्रम के आदान–प्रदान में रचनात्मकता तथा सांगठनिक कौशल का प्रदर्शन करती हैं, जो कि स्थानीय सामुदायिक श्रम निर्माण के लिये अत्यंत आवश्यक होता है।

अध्ययन के उद्देश्य :– प्रस्तुत अध्ययन का उद्देश्य बैगा जनजातीय समाज में महिलाओं की स्थिति को समझते हुए उनकी लोक कथाओं तथा मान्यताओं में महिला की स्थिति का अध्ययन करना है, साथ ही

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Study of the Impact of Covid-19 on the Physical and Social Development of Children of Late Childhood with Reference to Jabalpur District

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ABSTRACT: A study in the Jabalpur district found that children younger than five years with mild to moderate COVID-19 have a high amount of SARS-CoV-2 viral RNA in their nasopharynx compared with older children and adults. The data indicates that girls were already more vulnerable compared to boys even before COVID-19. The evidence shows that during previous periods of disease outbreaks like Zika, SARS and Ebola, adolescent girls are more vulnerable due to lost earnings and education, increased vulnerability to gender-based violence, and unintended pregnancy. Children and adolescents are more vulnerable to mental health issues because they were unable to comprehend the entirety of a situation nor fully communicate their feelings to adults. This vulnerability was heightened as the pandemic disrupted their normal lives, deprived them of schooling and, concomitantly, opportunities for socialisation and physical activities.

The tools used to mitigate the threat of a pandemic such as COVID-19 may very well threaten child growth and development. These tools — such as social restrictions, shutdowns, and school closures — contribute to stress in parents and children and can become risk factors that threaten child growth and development and may compromise the Sustainable Development Goals. The studies reviewed suggest that epidemics can lead to high levels of stress in parents and children, which begin with concerns about children becoming infected. These studies describe several potential mental and emotional consequences of epidemics such as COVID-19, H1N1, AIDS, and Ebola: severe anxiety or depression among parents and acute stress disorder, post-traumatic stress, anxiety disorders, and depression among children. These data can be related to adverse childhood experiences and elevated risk of toxic stress.

KEYWORDS: social, childhood, mental, physical, adolescent, Covid-19, outbreaks

I. INTRODUCTION

The COVID-19 pandemic has imposed a number of changes on daily routines in Jabalpur, India needed to preserve individual health. Meanwhile, it is important to note that children around the world continue to grow and develop.[2] In this scenario, one priority challenge is identifying and discussing pandemic-related factors that can negatively affect children's growth and development and impair each child's full potential, in order to develop prevention strategies that enable a healthier and more productive population over both the short and long term. Under the appropriate care and support of adults who provide children with constant feelings of security and affection, the child's body reorganizes itself biochemically and quickly returns to levels of physiological functioning without further damage. However, when this support is non-existent or inadequate, a failure of the body's functions to return to basal level primarily impacts the cardiovascular and neurological systems, with consequent irreversible loss of connections in the infant brain, due to toxic stress.[1]

An increase in parental stress levels during a pandemic, a factor that directly interferes in children's quality of life, is therefore evident. Anxiety, excessive concern with cleanliness, excessive fear of falling ill or losing a loved one,[3] concern for the elderly, increased domestic accidents, mood disorders, anxiety disorder, panic, or obsessive-compulsive disorder, and post-traumatic stress are consequences that children and adolescents may experience, according to research into pandemic situations similar to the current one.[4]

Genetic developmental programming is strongly influenced by the environment. In an environment with social restrictions — where play and leisure activities are only possible within the home environment; where people wear masks and the learning of facial expressions, communication, and language is restricted;[8] and where demonstrating affection is discouraged by many — there is a tendency towards limitations in the formation of certain areas of the

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Variation in Eye Color of Human Beings

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ABSTRACT

A person's eye color results from pigmentation of a structure called the iris, which surrounds the small black hole in the center of the eye (the pupil) and helps control how much light can enter the eye. The color of the iris ranges on a continuum from very light blue to dark brown. Most of the time eye color is categorized as blue, green/hazel, or brown. Brown is the most frequent eye color worldwide. Lighter eye colors, such as blue and green, are found almost exclusively among people of European ancestry.Eye color is determined by variations in a person's genes. Most of the genes associated with eye color are involved in the production, transport, or storage of a pigment called melanin. Eye color is directly related to the amount and quality of melanin in the front layers of the iris. People with brown eyes have a large amount of melanin in the iris, while people with blue eyes have much less of this pigment.A particular region on chromosome 15 plays a major role in eye color. Within this region, there are two genes located very close together: OCA2 and HERC2. The protein produced from the OCA2 gene, known as the P protein, is involved in the maturation of melanosomes, which are cellular structures that produce and store melanin. The P protein therefore plays a crucial role in the amount and quality of melanin that is present in the iris. Several common variations (polymorphisms) in the OCA2 gene reduse the amount of functional P protein that is produced. Less P protein means that less melanin is present in the iris, leading to blue eyes instead of brown in people with a polymorphism in this gene.A region of the nearby HERC2 gene known as intron 86 contains a segment of DNA that controls the activity (expression) of the OCA2 gene, turning it on or off as needed. At least one polymorphism in this area of the HERC2 gene has been shown to reduce the expression of OCA2, which leads to less melanin in the iris and lighter-colored eyes.Several other genes play smaller roles in determining eye color. Some of these genes are also involved in skin and hair coloring.

Genes with reported roles in eye color include ASIP, IRF4, SLC24A4, SLC24A5, SLC45A2, TPCN2, TYR, and TYRP1. The effects of these genes likely combine with those of OCA2 and HERC2 to produce a continuum of eye colors in different people.

Several disorders that affect eye color have been described. Ocular albinism is characterized by severely reduced pigmentation of the iris, which causes very light-colored eyes and significant problems with vision. Another condition called oculocutaneous albinism affects the pigmentation of the skin and hair in addition to the eyes. Affected individuals tend to have very light-colored irises, fair skin, and white or light-colored hair. Both ocular albinism and oculocutaneous albinism result from mutations in genes involved in the production and storage of melanin. Another condition called heterochromia is characterized by different-colored eyes in the same individual. Heterochromia can be caused by genetic changes or by a problem during eye development, or it can be acquired as a result of a disease or injury to the eye.

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Phenotypic and Genotypic Variations Regarding Earlobe and Hypertrichosis among Human Beings

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ABSTRACT: Hypertrichosis is an excessive growth of hair on a particular area of the body which is abnormal for the age, sex or race of an individual. The presence of the excessive coarse black hair on the auricle of the human ear is referred to as hypertrichosis pinnae auris or hairy ears. The condition is primarily restricted to older men and occasionally observed in females. According to the available literature, hypertrichosis pinnae auris is a Y-linked character. A number of studies have shown that the inheritance of the trait is from father to the son, any exceptions can be attributed to the lack of penetrance of the gene or crossing over from Y to X chromosome. A few researchers have suggested the probability of it being inherited in an autosomal manner. The mode of inheritance of the trait thus, remains controversial as to whether it is Y-linked or autosomal or perhaps both. The present article reviews various available studies on hypertrichosis pinnae auris in different populations of the world. It further deliberates on different aspects of the modes of inheritance of hypertrichosis pinnae auris and discusses the contradictions in its inheritance. The understanding of this area of research is significant for studying morphological variations and their genetic basis, sex differences among individuals and populations together with intergroup differences involving anthropology, anatomy, comparative morphology, personal identification and human genetics. The word 'Hypertrichosis' is derived from 'Hyper' that means over/excess/more than normal and 'trichosis' that refers to any abnormal condition of hair growth.

Thus, hypertrichosis is a condition characterised by the excessive growth of hair and its thickness in a particular area of the body which is not considered normal for the age, sex or ethnicity of an individual [1]. It is the presence of excessive hair on the body parts that otherwise lack hair growing normally. Hairs may be present at a single site or may cover the entire body, with the exception of the palms and soles. This type of hair growth is not confined to androgenic areas or bodily surfaces that depend on androgen for hair growth. Thus, hypertrichosis is considered as an androgen independent growth of hair on the body surface. Hypertrichosis should be differentiated from the term 'HIRUSTISM' which is defined as excess androgen sensitive hair growth. It is often diagnosed in women and children who have hair pattern as that of men. Therefore, hypertrichosis pinnae auris, also known as hairy ears is defined as the presence of the excessive hair growth on the outer helix of the pinna of the human ear. This trait is more commonly observed in older men and intermittent in females, the location of the hairs varying from top of the helix to the lateral side of the helix. Hypertrichosis pinnae auris has been reported in different ethnic groups. In the Online Mendelian Inheritance in Man (OMIM), the molecular catalog of human genes and related disorders, the hypertrichosis pinnae auris is included as hairy ears-139500 or hairy ears, Y-linked-425500 with HEY genetic locus on chromosome Yq.

I. INTRODUCTION

In human, attached earlobes are a dominant feature over free earlobes while hypertrichosis (Y-linked) feature. External human ear is considered to be a highly variable structure showing different morphological and individualistic features in different individuals and population groups. The uniqueness of the ear may be useful in establishing the identity of individuals by direct examination, during the examination of CCTV footage or analysis of the ear prints. Considering the forensic significance of the human ear and ear prints encountered at the scene of the crime, the present study is an attempt to evaluate various morphological characteristics of the ear in a north Indian population. Every human ear is unique and consequently its impression also because of the sufficient variability encountered in the external structure of the ear. The study provides new information on the ear variability and characteristics of a north Indian population which will add to the anthropological knowledge and morphological variability of the ear structure for further use in the forensic examinations particularly in the identification process involving facial and ear images. The researchers are

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Phenotypic Variations in Few Facial Traits of Human Beings

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ABSTRACT: Generally speaking, phenotypic variation in shape (or size) tends to be less studied as compared to less integrated traits (eg, pigmentation intensity and patterns). One-third of the mutations listed by Martin and Orgogozo concern morphological evolution (384 of 1008, including 281 in metazoans). Yet, we counted only 27 mutations (for a total of 18 genes) involved in body or organ shape changes and 25 mutations (for a total of 23 genes) involved in body or organ size changes. Only four case studies have pointed genes associated with changes in size and shape in epithelial tissues directly: three of them deal with insect wings. Epigenetic modifications can cause phenotypic variation within a single generation. This timeframe means that, in response to a changing environment, the epigenetic inheritance system has the potential to be much more flexible than traditional genetic mutations, and also that epigenetic inheritance systems may have far greater consequences for adaptive evolution than has previously been recognized. Given this potential, it is important to consider epigenetics' role in speciation. It is thought that epigenetics may contribute considerably in the initial stages of population divergence, enabling speciation by facilitating phenotypic adaptation through epigenetic modifications, after which genetic changes reinforce the divergence. This concept, largely inspired by Jablonka and Lamb, as well as others, has led to widespread acknowledgement regarding the evolutionary significance of epigenetic inheritance. Accordingly, population-epigenetic models have recently been formulated, incorporating parameters considered central to epigenetic inheritance systems.

The human face is extraordinarily variable, and the extreme similarity of the faces of identical twins indicates that most of this variability is genetically determined. We have devised an approach to increase the chance of identifying specific large genetic effects on particular facial features, by choosing features with high heritability and selecting individuals with relatively extreme facial phenotypes for comparison with a control population. This has yielded three specific and replicated genetic variants, two for features of facial profiles, and one for the region around the eyes. Further application of these methods should enable the understanding, eventually at the molecular level, of the nature of this extraordinary genetic variability, which is such an important feature of our everyday human interactions.

I. INTRODUCTION

To discover specific variants with relatively large effects on the human face, we have devised an approach to identifying facial features with high heritability. This is based on using twin data to estimate the additive genetic value of each point on a face, as provided by a 3D camera system. In addition, we have used the ethnic difference between East Asian and European faces as a further source of face genetic variation. We use principal components (PCs) analysis to provide a fine definition of the surface features of human faces around the eyes and of the profile, and chose upper and lower 10% extremes of the most heritable PCs for looking for genetic associations. Using this strategy for the analysis of 3D images of 1,832 unique volunteers from the well-characterized People of the British Isles study and 1,567 unique twin images from the TwinsUK cohort, together with genetic data for 500,000 SNPs, we have identified three specific genetic variants with notable effects on facial profiles and eyes.[1]

The human face is an important interface of social interaction; communication, sensory input and expression in humans are to a large extent based on facial characteristics and traits1. Normal facial variation is associated with emotional expression2, attractiveness3 and even lifetime reproductive success4. Recent evidence suggest that evolution has contributed to increased diversity and complexity in human facial morphology, presumably due to the role of the face as a primary medium of individual identification and recognition5. The influence that facial features have in our life has spurred a long and ongoing interest in unraveling the roles that genes and environment play in the morphological characteristics of the human face.Heritability studies were carried out to quantify the extent of phenotypic variation that can be explained by genetic variability using, for instance, facial features extracted from cranial measurements. Moderate heritability, varying approximately between 0.35 and 0.65, was found for traits such as nasion-basion and nasion-sella distances.. More recent studies used facial photographs instead, due to the simplicity in which the images

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Research Paper

Comparing Efficacy of mRNA and AstraZeneca vaccines against SARS-CoV-2variants of concern

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Abstract: Since upsurge of coronavirus pandemic in December 2019, caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), the number of confirmed cases has increased more than 308 million worldwide, with nearly 5 million deaths. Vaccines are best way to control covid-19 pandemic as suggested by researchers all over world. Current COVID-19 vaccines were based on the SARS-CoV-2 spike protein, which virus used to bind and infected host cells. But the emerging "variants of concern" seemed to be more transmissible or deadlier than the wild-type SARS-CoV-2,containedmutations in the spike protein, questioning vaccine efficacy concerns. Multiple vaccines Pfizer-BioNTech, Moderna Sinopharm, Sinovac, Oxford-AstraZeneca, Sputnik V, Novavax have been granted authorization for vaccination against covid -19 in different countries. Despite authorization having been granted for multiple vaccines, as the ongoing global outbreaks demonstrated, the pandemic is far from over. This review discussed mutations in spike proteins and compared effectiveness of mRNA and AstraZeneca against variants of concern. Vaccine effectiveness was increased ≥7 days after the second dose against Alpha for all three vaccines: mRNA-1273=92% (95% CI, 88–95%), Pfizer=89% (95% CI, 87–90%), and AstraZeneca=91% (95% CI, 62–98%). Efficacies for double dose mRNA vaccines are 84%, 88%, and 77% respectively against both Beta and Gamma variants together in multivariate analysis. Efficacy reported for greater for Beta compared to Gamma variant. Vaccine effectiveness of the two-dose regimen of AstraZeneca after 14 days of the second dose is 77.9% (95% CI, 69.2–84.2) against Covid-19, 87.6% (95% CI, 78.2–92.9) against hospitalization, and 93.6% (95% CI, 81.9–97.7) against death for Gamma variant. The effectiveness of two doses Of Pfizer and AstraZeneca was documented 88.0% (95% CI, 85.3 to 90.1) and 67.0% (95% CI, 61.3 to 71.8) against the Delta variant. There was no effect against Omicron from 15 weeks after AstraZeneca two dose regimens, while VE after Pfizer two dose regimen was 88.0% (95%CI: 65.9 to 95.8%) 2-9 weeks after dose 2,

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Prototype to minimize the freeze storage effect on the nutritive value of fishes of high commercial value.

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ABSTRACT
The present investigation was directed towards the study of the comparative effect of frozen storage on the proximate ,biochemical of the muscle of fresh water fishes Labeo rohita and Catla catla of high commercial value. The current research also focuses on the development of a prototype of a new fish preservation method to increase their shelf life for commercial purpose. During the study period the fish muscles were processed with two types of preservatives including a mix of sodium chloride and ascorbic acid and also a blend of sodium chloride and dried citrus fruit (lemon) peel powder and then subjected to frozen storage for a period of 21 days in 02 freezing conditions viz- at -20 ±2°C and at 0 ±2°C and the analysis was carried out at an interval of 07 days. Unprocessed fresh water fish samples of Labeo rohita and Catla catla were treated as control. With the increase in period of frozen storage protein and lipid hydrolysis is enhanced followed by decrease in protein lipid content, pH Value, and Water Holding Capacity (WHC) while the values of Lipid peroxidation and amount of Thiobarbituric acid (TBA) content increased as the time period of storage was enhanced. However, as the results of this study reflects that freezing of fresh water fish after processing them with preservatives like NaCl and Lemon peel powder or NaCl and Ascorbic acid powder may lead to less spoilage during storage or transportation. The outcome of this current research focusses on the fact fresh fishes should always be the choice during its purchase as the rate of spoilage speed up and quality of frozen fish starts deteriorating with passage of time.

Keywords: Preservatives, Frozen storage, Prototype, Biochemical composition.

1.INTRODUCTION
Jabalpur district of Central India is a commercial hub with multiple flourishing business sectors including the fisheries division. But with increased demand and subsequent supply along with environmental conditions like humid weather and hot summer there is increased demand of appropriate storage facilities in the district. Like any other division, in the fisheries sector too; there is an urgent need to search for alternative cost effective frozen storage practices to increase the shelf life of fishes and also to manage the demand-supply ratio. Frozen storage offers a means of preserving fish; however, during frozen storage, quality is lost due to a deterioration of texture, flavour and colour, especially after long periods of storage, when poor freezing practices are employed or when the initial fish quality is low[1]. Cellular disintegration during frozen storage can cause acid hydrolysis of lipids to free fatty acids. The changes in fish muscle fibers, proteins, lipids and textural properties during frozen storage have been studied for several decades because of their economic importance, also due to this importance . (Haard NF.,1992 & Solanki JB et.al 2011).

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Research Article

STUDY OF THE COMPARATIVE EFFECT OF FROZEN STORAGE ON THE MICROBIAL PROFILE OF THE MUSCLE OF FRESH WATER FISHES OF HIGH COMMERCIAL VALUE

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ABSTRACT

The present investigation was directed towards the study of the comparative effect of frozen storage on the microbial profile of the muscle of freshwater fishes *Labeo rohita* and *Catla catla* of high commercial value. The current research focuses on the development of an archetype of a new fish preservation method to increase their shelf life for commercial purpose. During the study period, the fish muscles were processed with two types of preservatives including a mix of sodium chloride and ascorbic acid and a blend of sodium chloride and dried citrus fruit (lemon) peel powder and then subjected to frozen storage for a period of 21 days in 02 freezing conditions *viz* at-20±2°C and 0±2°C. The analysis was carried out an interval of 07 days and unprocessed fresh water fish samples of *Labeo rohita* and *Catla catla* were treated as control. The freezing of fish at low temperature after processing with NaCl and Lemon peel powder or NaCl and nontoxic pure ascorbic acid powder may make it less prone to spoilage by decreasing the bacterial activity. As a result of this, freezing at -20±2°C temperature and processing of fishes with both the blends of preservatives are highly recommended as low-cost and eco-friendly preservation technique due to above mentioned reasons for freeze storage of fishes for commercial use.

Keywords: Preservatives, Frozen storage, Archetype, Reduction of Bacterial Activity.

1. INTRODUCTION

With diverse environmental conditions like humid weather and hot summer, there is increased demand of appropriate alternative cost effective frozen storage facilities for fishes in Jabalpur district of Central India to manage the demand-supply ratio. Inappropriate freezing practice and humid conditions favour microbial growth and fish tissue degradation. Frozen storage offers a means of preserving fish however, during frozen storage quality is lost due to a deterioration of texture, flavour and colour especially after long periods of storage when poor freezing practices are employed or when the initial fish quality is low [1].

Thus in context of analysis of frozen storage effect on fishes, the aim of the present comparative study was to assess the variations in the microbial status of the freeze stored processed freshwater fishes of high commercial value in comparison to effect of freezing on microbial profile of unprocessed freshwater fishes (*Labeo rohita* and *Catla catla*) treated as control and kept for 7th,14th and 21st days in 02 different frozen storage conditions *viz*. at -20±2°C (good freezing practice) and at 0±2°C (poor freezing practice). The present study aims to develop an archetype of a novel fish preservation method using two different blends of preservatives to enhance the conditions of fishes for commercial purpose.

2. MATERIAL AND METHODS

2.1. Collection of fish samples and processing of fish tissues

During the study period, untreated freshwater fishes of high commercial value (*Labeo rohita* and *Catla catla*) were collected from Govt. fish farm Ranjhi, Jabalpur. The fish samples were kept immediately with crushed ice and ice packs in thermocool ice boxes and were transported to the lab for further analysis.

2.2. Preparation of Fish Samples

The fishes were washed with large amount of distilled water and triplicates of 65 gms each of muscles of unprocessed freshwater fishes were taken out in 3 parts from the dorsal part of the body. The first triplicate parts of 65 gm of fish muscles were treated as control while second triplicate parts of 65 gm of fish muscles

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REVIEW ARTICLE

Indian Street Food Safety

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Key words: Ethnobotanical, Pharmacological, Indian saffron, Curcumin

Abstract

India is famous for its street food and each city of India has its own unique street food and a massive percentage of the population relishes these delicacies. Food is only nutritive nutritious when is pure, fresh and free from hazardous matter such as pathogenic bacteria. Infected food or contaminated foods cause danger to health and impair quality of life. Food safety of street food has always been a matter of concern because consumption of these roadside foods has been suggested/reported to potentially increase the risk of foodborne diseases as street foods are readily contaminated from different sources like traditional processing methods that are used in the preparation, inappropriate holding and poor personal hygiene of food handlers are some of the main cause of contamination of street-vended foods. Thus there is emerging needs like provision of health education to the vendors and enforcing implementation of appropriate hygienic practice as control preventive measure to improve the microbial quality of street foods.

Introduction:

A major determinant of health is the consumption of wholesome food. Wholesome has two important dimensions firstly, the food should be of good nutritive value secondly and equally important is that the food should be free from contamination of toxic agents and noxious substances that would weaken the health and cause foodborne diseases. Ensuring food safety is, therefore, an important cornerstone in maintaining health (https://www.nutritionfoundationofindia.res.in).

Food is the most fundamental need of human beings. Zero hunger has been identified as one of the sustainable development goals to transform the world. The availability of food is not enough, but the available food must be safe and free from pathogens so that it can serve its purpose of growth and development. Food is the only nutritive when it is pure, fresh and free from hazardous matter such as pathogenic bacteria. Infected food or contaminated food cause danger to health and impair quality of life. Considering this crucial point, in 2015, World Health Organization has kept their theme on food safety i.e. from farm to plate-make food safe. World Health Organization has also given five keys for safer food viz. as keeping clean, separating raw and cooked food, cooking food thoroughly; keeping food at safe temperatures, use water and raw materials (WHO, 2015). It is a practical guide for all the food handlers including vendors and consumers.

In India, tremendous economic growth is taking place. One outcome of this is that "eating out" has become an important part of daily life, especially in urban areas (Kashyap *et al.*, 2004). This is leading to the rapid growth of street foods. Street foods offer several varieties of foodstuffs that are fresh, tasty, quickly readily available at a reasonable price.

Streets foods have a wide range of "ready to eat" food and beverages prepared and sold by vendors and hawkers, especially in the street and other similar public places (FAO, 2011). Street foods play an important role in sustaining the oculture, social heritage of societies and are an essential component for maintaining the nutritional status of the population (Rane, 2011). According to the national policy for urban street food vendors (http://www.nasvinet.org), in India total number of street vendors is estimated at around 10 million. Some studies also estimated that street vendors constitute approximately 2% of the population of a metropolis, this number is likely to increase further. India is a country where each city boasts its own unique street food and a large percentage of the population relishes these delicacies. The most popular street food in India is shown in Table-1.

Street foods are popular because of their unique flavour, variety, inexpensiveness, convenience and

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Development of Modules to combat Malnutrition among children under five years

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Abstract: *Children are the human resource and assets of a nation. A country's health is gauged through the health of its children. It is therefore essential that children are allowed to grow in an environment which is suitable to meet their nutritional, social, emotional and educational needs for their development. Hence it is essential to improve knowledge of mothers regarding food, nutrients, health and hygiene as they feed and keep their child healthy. Study developed two modules for intervention of Malnutrition in under five children. Modules were explored among mothers of children under five and pregnant women. Modules were found to exert significant positive influence on the gain in knowledge about nutrition and general awareness.*

Keywords: *Malnutrition, Modules, Children under five.*

INTRODUCTION:

nutrition is derived from the etymological origins as malus (bad) and nutire (to nourish). It conveys and denotes the e of improper nutritional status, outside the norm of healthy boundaries. Dynamic changes in the nature of loping societies and deepening of our understanding of human and clinical nutrition have put a changing face on roblem of malnutrition in developing countries [1].

nutrition is defined as a pathological state resulting from a relative or absolute deficiency or excess of one or more ntial nutrients. It comprises under nutrition, over nutrition, imbalance and specific deficiency [2]. Malnutrition is dly categorised into three types that are underweight, stunting and wasting. Malnutrition is not only an important e of childhood mortality and morbidity, but also leads to permanent impairment of both physical and mental growth ng malnourished children. Inadequate intake of food, both in quality and quantity, infection, poor environmental ition, poor mental health, inadequate health services, large family size and number of siblings are the major ributory factors of malnutrition among children [3].

years of childhood are the most important years of human life that can seriously affect the health status of whole eriously [4]. The first five years of life are so momentous, low and inadequate nutrition during this period may lead irreversible growth, decrease along with cognitive ability disorders and performance reduction lifelong [5]. Good tional status and appropriate nutrition both are the key to healthy living, therefore study tried to make modules to ate the population against child malnutrition that will be helpful in reduction of malnutrition in children under five of age.

REOPENING LIBRARIES IN COVID 19 PANDEMIC : CHALLENGES

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ABSTRACT
Libraries around the world have been facing lockdown challenges in providing access to its collections and services. India has ranking second largest county in term of population in the World after China. As a precautionary measure, The Union Government of India has declared the national level closed down after 22nd March, 2020 to break the chain of the COVID 19 pandemic. But the day is not far away to start the process of removing the restrictions step by step in phased manner. Hence, we the library professionals should also be prepare to reopen the libraries along with the COVID 19. We have a huge responsibility to protect the clienteles, staff and the library resources in such a pandemic situation. While reopening the library after the lock down we need to take precautionary measures to slow down and prevent the COVID 19. The author has mentioned the challenges and suggested recommendations of the libraries during post lock down period. The paper tries to suggest some possible solutions on how to provides more efficient library service in future.

Key Words : Reopening library, Library in COVID 19.

INTRODUCTION
The COVID 19 is now called Severe Acute Respiratory Syndrome Corona Virus 2 (SARS-CoV-2) old name was called HCoV-19, emerged in China, in late 2019 and is now causing a pandemic (Van Dormalen, Neelatji et al. 2020) and covered widest area of the World. Coronavirus refers to a family of viruses. COVID-19 – or Coronavirus Disease – is the infectious disease caused by a newly discovered type of coronavirus. COVID stands for CO for Corona, VI for Virus and D for Disease (WHO, 2020). As the World Health Organization (WHO) has set out, most people infected with the COVID-19 virus will experience mild to moderate respiratory illness and recover without requiring special treatment. Older people, and those with underlying medical problems like cardiovascular disease, diabetes, chronic respiratory disease, and cancer are more likely to develop serious illness (UNICEF; 2020). COVID 19 is not new virus, but this type of harmful virus never damaged the human life in the past as it has started at the late 2019. When it has started, the entire World economy and the social life has stopped including publishing industry. Hence, printed literature is not available on the above topic. But important agencies like, World Health Organisation (WHO), UNICEF, Ministry of Health of some countries have posted the general guidelines to slow down and prevention of the pandemic. International Federation of Library Association (IFLA), American Library Association (ALA), and some LIS associations have uploaded the precautionary measures on the reopening the libraries to control the pandemic from library. The general guidelines of the pandemic as well as library specific literature has referred from the above noted sources to complete this study and prepared exclusively for re-opening the closed libraries.

PRECAUTIONARY MEASURES TO PREVENT FROM COVID 19
Self-quarantine is the best way to avoid the COVID 19, but human being is social animal, the pandemic has no vaccine and the isolation for longer duration is not possible to any person. In the light of the above, it has recommends that people should follow respiratory etiquette (for example, by coughing and sneezing into a flexed elbow, or a tissue that they immediately throw away). They should also wash their hands or use to apply an alcohol-based sanitizer to hands frequently. They should not touch their faces and social distancing should be always keep in mind. Further, this is

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Impact of Nutrition Education on Knowledge Attitude and Practices (KAP) Score on Gond Tribal Mothers of Preschool Children of Niwas, Mandla

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Abstract :- A large population of world's malnourished children live in India. Under weight, stunting and micronutrient deficiencies such as Anaemia and vitamin A deficiencies were common among of preschool children of Gond tribal community in Madhya Pradesh. Objective: The objective of the present research work was to provide nutrition education to tribal mothers and to assess the impact of nutrition education on them through Knowledge, Attitude and Practices (KAP) test so they are able to provide proper nutritious diet to their children within available resources. Design: Cross –sectional study was designed and self made Knowledge Attitude Practices (KAP) was administered to the mothers selected in the sample. Ten intervention of nutrition education classes were held for these mothers in a period of 3 months who were imparted nutrition education. Setting: Niwas sub district, Mandla(M.P.), India. Participants: A sample of 300 Gond tribal mothers whose children were between 06 months to 5 years was selected for the study. Result- After nutrition education 77% mothers were scored Fair Knowledge score, 70% were scored Fair Attitude Score and 55% were scored Fair Practices score. Conclusions- It was found that there was a positive impact of nutrition education programme on tribal mothers.

Index Terms :- Nutrition Education, Gond, Tribal mothers, Preschool children, Knowledge Attitude Practices (KAP) test

I. **Introduction** :- The tribal population of India constitutes 8.6% of total population of the country and majority of them reside in the rural areas (Singh et al, 2014). Numerically, the highest tribal concentration is in Madhya Pradesh, which is 14.7% of the total tribal population of India. According to Census of India 2011, total population in the country was 121 billion out of these 104.49 million were classified as scheduled tribes with 52.5 millions males and 51.8 millions females. Total tribal population in Madhya Pradesh was 15.3 million (Census of India, 2011). There are 46 scheduled tribes inhabiting in the state. Gonds holds the 2nd position in term of their population size in MP with 50.93 lakhs (33.3%) of total scheduled tribe population. (Census of India 2011 and Annual report (2019-20),Ministry of Tribal Affairs)

Nutrition of Pre School children is of paramount importance, because it is the foundation for life time health, strength and intellectual vitality which is laid during this period. Today's child is a citizen of tomorrow and has valuable hand in nation building. Inadequate nutrition among the children leads to develop improper development of their body and mind, resulting into lower level of efficiency (Ahmed, 2012). It is well documented that the growth and nutritional status of preschool children are useful and sensitive indicators for judging health of a community or a nation (Sachdev, 1995; Bisnoi et al, 2004). Hence improving nutritional status of children becomes extremely important.

Childhood malnutrition is one of the most important health risks in developing countries and is a main reason of child death. A large proportion of the world's malnourished children live in India, thus alleviating the burden

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Development of Modules to combat Malnutrition among children under five years

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Abstract: *Children are the human resource and assets of a nation. A country's health is gauged through the health of its children. It is therefore essential that children are allowed to grow in an environment which is suitable to meet their nutritional, social, emotional and educational needs for their development. Hence it is essential to improve knowledge of mothers regarding food, nutrients, health and hygiene as they feed and keep their child healthy. Study developed two modules for intervention of Malnutrition in under five children. Modules were explored among mothers of children under five and pregnant women. Modules were found to exert significant positive influence on the gain in knowledge about nutrition and general awareness.*

Keywords: *Malnutrition, Modules, Children under five.*

1. INTRODUCTION:

Malnutrition is derived from the etymological origins as malus (bad) and nutire (to nourish). It conveys and denotes the sense of improper nutritional status, outside the norm of healthy boundaries. Dynamic changes in the nature of developing societies and deepening of our understanding of human and clinical nutrition have put a changing face on the problem of malnutrition in developing countries [1].

Malnutrition is defined as a pathological state resulting from a relative or absolute deficiency or excess of one or more essential nutrients. It comprises under nutrition, over nutrition, imbalance and specific deficiency [2]. Malnutrition is broadly categorised into three types that are underweight, stunting and wasting. Malnutrition is not only an important cause of childhood mortality and morbidity, but also leads to permanent impairment of both physical and mental growth among malnourished children. Inadequate intake of food, both in quality and quantity, infection, poor environmental condition, poor mental health, inadequate health services, large family size and number of siblings are the major contributory factors of malnutrition among children [3].

Early years of childhood are the most important years of human life that can seriously affect the health status of whole life seriously [4]. The first five years of life are so momentous, low and inadequate nutrition during this period may lead to an irreversible growth, decrease along with cognitive ability disorders and performance reduction lifelong [5]. Good nutritional status and appropriate nutrition both are the key to healthy living, therefore study tried to make modules to educate the population against child malnutrition that will be helpful in reduction of malnutrition in children under five years of age.

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AMBIENT APPRAISAL

Bacteriological Quality of Water Used by Street Food Vendors in Jabalpur City of Central India

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Study Area: Jabalpur, India
Coordinates: 23°10'N; 79°56'E

Key words: Total coliform count, Water borne illness, Water contamination, *E. Coli*, *Enteritidis*

Abstract

Water and foodborne illness are a serious health hazard related to the consumption of street foods worldwide. Among all the potential risk factor, inappropriate use of water for the preparation of street food and drinking increased the risk of water and foodborne illness. The main aim of the study to examine the total coliform count of water used by street food vendors for preparation and drinking purpose. Total 36 water samples were examined for the total coliform count. A water sample collected from street food vendors of four zones of Jabalpur city during summer, rainy and winter season with the help of coliform count Flexi plates procured from Hi media laboratory. The total coliform count of water was found highest in the rainy season (1175.1±413.7) followed by summer (566.1±285.5) and winter (70.7±32.3) respectively. Bacterial isolates identified in the present study were *Escherichia coli, Klebsiella pneumonia* and *Salmonella Serotype enteritidis*. It was seen that the quality of water used by vendors was not meet the guidelines of WHO and BIS.

Introduction:

Food and water are the most potent vehicles for the transmission of microbial hazards. Water and foodborne illness is a major public health problem associated with the consumption of street vended foods (Bhowmik, 2010, Biswas *et al.*, 2010 and Tabashsum *et al.*, 2013). Water and foodborne illness or diseases commonly caused by either toxin in microbes or by the human body's reaction to microbes. Illness associated with the consumption of street vended foods often arises from lack of clean water for direct consumption, food preparation, washing utensils and personal hygiene. Inappropriate used of water by street vendors also increased the risk of contamination as a result of water for customer consumption or for the preparation of food and beverages is often kept in containers that are uncovered, dirty or difficult to clean and repeated used of same dirty water to wash utensils. Presence of coliform bacteria mainly *E. coli*, *Salmonella*, *Klebsiella pneumonia etc.* in water increasing the risk of gastrointestinal disease. Moreover, street foods are frequently associated with many waters and foodborne illness like diarrhoea, hepatitis, typhoid etc. disease due to improper handling and use of dirty water (Mali *et al.*, 2019). The global burden of infectious diarrhoea involves 3-5 billion cases and nearly 1.5 million deaths annually, mainly in young children, due to diarrhoeal disease caused by contaminated food and water (NCDC, 2017) Street food are very popular among consumer, because of their taste, low price and ready to eat availability (FAO, 2011). The street food vendors are generally illiterate and not aware about health, personal hygiene, sanitation and microbial aspect of water used in the preparation and drinking purpose. Jabalpur is one of the smart cities and it became a street food hub in recent times that open the door of water and foodborne illness so, it is considered worthwhile to embark upon water quality used by street food vendors in Jabalpur city.

Methodology:

Total 36 water sample collected in sterilize container from street food vendors from four zones (Zone A, B, C and D) of Jabalpur city during summer, rainy and winter season. Plate count method was used for the total coliform count of water. For this 1 ml of water sample was placed into the coliform count Flexi plates (procured from Hi media laboratory) and incubate the plates 44°C for 24 hours. After

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RESEARCH ARTICLE

Antibacterial sensitivity of *Escherichia coli* isolated from milk and milk products in Jabalpur, MP, India

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Abstract: Milk and milk products are an essential element of the diet. Apart from its nutritional value, it can also serve as a carrier for multidrug-resistant bacteria attributed to many infectious diseases. The present study was conducted to detect antibiotic-resistant bacteria from milk and milk products (Raw milk, pasteurized milk, and cottage cheese) marketed in Jabalpur city of Madhya Pradesh, India. A total of 640 samples of pasteurized milk, raw milk, and cottage cheese were collected in a sterile container from different dairies and shops of Jabalpur city. Immediately after collection, samples were brought to the microbiology lab within 1 hour. The *Escherichea coli* were isolated from milk and cottage cheese samples, based on cultural and molecular tests. These isolates were further subjected to antibacterial susceptibility against commonly used antibiotics by the disk diffusion methods. Out of 640 samples examined, 118 (18.44%) were positive for *Escherichea coli*. The highest isolation of *Escherichea coli* was from cottage cheese (32%), followed by raw milk (22.5%) and pasteurized milk (0%). Antibiotic susceptibility profile showed that *Escherichia coli* were resistant for nitrofurantoin (61.8%), nalidixic acid (37.2%) and cefotaxime (36.5%). The analysis showed that 89.8% of isolates showed multidrug resistance comprising 2-3 antimicrobials. The presence of *Escherichea coli* with multiple antibiotic resistances poses a significant threat to public health and food safety. These findings stress the need for better sanitation practices in the production and consumption of milk and milk products and strict monitoring of uses and misuses of antibiotics in humans and food animals.

Keywords: Antibiotic resistance, Antibiotic resistant bacteria, Milk and milk products

Introduction

Milk and milk products are an indispensable part of the Indian diet. When milk is secreted from mammary glands to alveoli of the udder, it is generally free from microbes (Tolle, 1980). However, later on, different sources might contribute to the contamination of milk with a wide variety of microbial populations (Mennane et al. 2007). Unhygienic practices in pre milking preparation of udder, substandard hygiene of milk handlers, and poor sanitation practices related to milking and storage equipments are the responsible factors for contamination of raw milk at different critical points (Garedew et al. 2012). Milk and milk products are rich in various nutrients such as, proteins, fats, carbohydrates, minerals, and vitamins. These nutritional contents [illegible] a perfect medium for the growth of microbes. Microbial quality of the milk and milk products also depends upon production procedures and post-production processing, handling, packaging, and storage of products (Kumar et al. 2013). In India, several studies reported contamination of dairy products with various pathogenic microorganisms that could cause disease in humans (Desale et al. 2009; Vashmavi et al. [illegible]; [illegible] 2017; Godbole et al. 2013). According to [illegible] et al. [illegible] to 5% of foodborne infections are attributed to the consumption of milk and dairy products in developing countries like India. Therefore, milk and its products can be an efficient vehicle for transmission of diseases causing agents to human beings (Garedew et al. 2012).

Escherichia coli bacteria are frequently used as an indicator of fecal contamination of milk and dairy products and [illegible] the presence of disease-causing serotypes for humans. [illegible] strains of *E. coli* have been associated with several life threatening food-borne outbreaks worldwide ([illegible]).

Antibacterial resistance can further increase the mortality rate; various resistant strains of *Escherichea coli* have been reported

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DETECTION AND QUANTIFICATION OF OXYTOCIN IN MILK SOLD IN JABALPUR, MADHYA PRADESH, INDIA

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ABSTRACT

Aim of this study was to detect oxytocin in milk available in the market of Jabalpur city and to determine its concentration in cow and buffalo milk samples. Total 89 samples (Cow-47, Buffalo-42) were collected from the dairies of different zones in the city and further examined for oxytocin concentration. Mean oxytocin concentration in cow and buffalo milk sample was 23.58, 22.15, 25.46, 25.54 pg/ml, and 36.28,60.31,134.18,168.38 pg/ml from North, East, South, and West zones of Jabalpur city, respectively with the overall mean value of 23.91 and 103.29 pg/ml. No significant difference (P<.05) in the oxytocin concentration of cow milk from different zones was observed. However, zone wise significant difference (P<.05) in the oxytocin concentration of buffalo milk samples was observed. Oxytocin concentration of cow and buffalo milk also differs significantly (P< 05). Present study reported the extensive use of exogenous oxytocin in cattle of Jabalpur city and also observed that the use of this hormone is more prevalent in buffaloes than in cows, as larger concentration of oxytocin is observed in buffalo milk.

Keywords: Buffalo, Cow, Jabalpur, Milk, Oxytocin, Zones

Milk is an indispensable part of the human diet and important food that contains a significant amount of essential nutrients such as lactose, fat, protein, minerals, and vitamins in a balanced ratio in comparison to other foods (Hossain and Dev, 2013). It is known to be a well-balanced food for infants and newly born animals (Abdelfatah *et al*., 2015; Jafarpour, 2017). It usually contains 3.5 % fat and 8.5% solids not fat (Żywica *et al*. 2012). However, the composition of bovine milk varies with individual animal, breed, season, diet, and phase of lactation (Ahmed *et al*., 2013).

India tops the world in annual milk production, however, its demand has also been increased due to the growth of population which creates a gap between demand and supply (Awan *et al*., 2014) and because of this gap and poorly organized non-regulatory marketing system, quality of milk is being compromised with various unethical practices including the use of oxytocin (OT) injection by dairy cattle and milch buffalo owners under the false impression that it improves the milk yield (Javaid *et al*., 2009 and Assad *et al*., 2016).

Oxytocin is a hormone consisting of nine amino acids - cysteine, tyrosine, isoleucine, glutamine, asparagines, cysteine, proline, leucine, and glycinamide, secreted from neural as well as non-neural sources inside the body and acts at the mammary glands, causing milk to let down into subareolar sinuses, from where, it can be excreted (Kavitha *et al*., 2010). In dairy industries, exogenous oxytocin used in cows before milking is intended to treat the disturbed milk ejection caused by diminished endogenous oxytocin release and also for mastitis cure (Hameed *et al*. 2016). However, indiscriminate use of oxytocin in the dairy industry is common practice with and only intention to increase the production of milk without knowing its harmful physiological effect (Hameed *et al*. 2016). Oxytocin injection in animals showed reduction in milk yield, milk fat percentage, disturbance of cell mechanisms for the synthesis of protein within mammary glands and such animals also suffered from mastitis during the period (Mustafa *et al*., 2008; Hameed *et al*. 2016). The routine intramuscular injection of oxytocin to induce milk ejection has a negative effect on behavioral stress indicators as serum cortisol concentration has been found to be increased in cattle (Garcez *et al*., 2013). Its intestinal absorption for human consumption is disputable, but some studies observed that oxytocin in breast milk can be absorbed intact from the digestive tract into the blood of neonates (Takeda *et al*. 1980; Lunghi *et al*., 1994). Being categorized as a hormone, a small amount of oxytocin is needed to carry out the certain physiological functions of the body during pregnancy, labor, and after delivery. However, unnecessary consumption of oxytocin may cause harmful effects on human health. 0.5-1% of bio-available oxytocin through oral consumption of contaminated milk to neonates and children may affect the central nervous system. Recently, several studies suggested that oxytocin exposure from early childhood may not show any alteration in classical toxicological

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COMPARATIVE STUDIES OF GENDER FOR VITAMIN D STATUS IN HEALTHY ADOLESCENTS OF KATNI DISTRICT (MADHYA PRADESH)

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Abstract
Vitamin D is very important for bone health. Its prolonged and severe deficiency leads to rickets in children and osteomalacia in adults. Different factors contribute to this deficiency including lack of sunlight exposure due to unfavorable location, dressing style, pigmented skin and less time spent outdoors and lower vitamin D intake in diet. This study aims to compare the prevalence of vitamin D deficiency in different gender among adolescents. Data of 300 adolescents from 3 schools and 2 colleges of Katni (Madhya Pradesh) were collected with their demographic data and bone mineral density was measured for all the subject population. Based on the result of low mineral density, further analysis of nutrient intake, dairy product intake lifestyle and health characteristics were recorded. We concluded the more prevalence of vitamin D deficiency in females as compared to males. A national strategy is needed to control a vitamin D deficiency in females by screening vitamin D status among adolescents and enhancing vitamin D fortification and supplementation.
Keywords: Vitamin D, adolescents, nutrient, rickets, sunlight, osteomalacia, deficiency.

Introduction
Vitamin D plays an essential role in the calcium absorption, growth of bone and bone mineralization. It is very well known that prolonged and severe vitamin D deficiency leads to rickets in children and osteomalacia in adults [1]. Vitamin D deficiency is a major unrecognized health problem. But, recently hypovitaminosis D renewed interest of researchers once again. Some evidences suggest its involvement in a multitude of other non-skeletal functions in the body. Its deficiency increases the risk for many chronic diseases including autoimmune disease, hypertension, malignancies, cardiovascular and infectious diseases schizophrenia and type 2 diabetes [2-3].
Vitamin D have been made in the earliest life forms of life such as phytoplankton, zooplankton, and most plants and animals. It is made before 750 million years ago by the exposure of sunlight. Vitamin D is critically important for a healthy skeleton from birth until death. It is required at all ages of life [4]. The serum concentrations of vitamin D are influenced by several factors such as sun exposure, diet, skin pigmentation, season, latitude, clothing and tanning habits [5]. Vitamin D maintains calcium homeostasis by increasing the efficiency of the intestine to absorb dietary calcium. Inadequate calcium in the diet forces vitamin D to communicate with osteoblasts that signal osteoclast precursors to mature and dissolve the calcium stored in the bone [6]. Vitamin D is first metabolized in the liver followed by kidney to 1,25-dihydroxyvitamin D [1,25(OH)2D]. 1,25(OH)2D receptors (VDR) are present mainly in the intestine and bone, but also reported in heart, brain, pancreas, stomach, skin, T and B lymphocytes and gonads [7]. The presence of (VDR) in most body tissues indicates its broader physiologic role.
Global Consensus recommendations of 2016 define standards for defining vitamin D status in healthy children and adolescents and upon serum concentrations of 25(OH)D: Vitamin D sufficiency: 20 to 100 ng/mL (50 to 250 nmol/L), Vitamin D insufficiency: 12 to 20 ng/mL (30 to 50 nmol/L) and Vitamin D deficiency: <12 ng/mL (<30 nmol/L)[8]. Studies in adolescents regarding the vitamin D revealed vitamin D deficiency is continuously increasing worldwide [9]. The diagnosis of vitamin D deficiency is based on a combination of nutritional features such as very low serum 25-hydroxyvitamin D (25[OH]D) (<10 ng/mL [25 nmol/L]), low to low-normal serum calcium, phosphate and phosphorous level and high parathyroid hormone (PTH) and alkaline phosphatase levels [10].
Adequate Vitamin D is essential for growth and development of children and adolescents. Its deficiency mainly occurs due to lack of sun exposure. Research suggests that approximately 10- 30 minutes of exposure to ultraviolet radiation of specific length wavelength (290–315 nm : UVB) on the face, arms, legs, or back at least twice per week usually leads to sufficient vitamin synthesis in body. This exposure can be affected by skin pigmentation, use of sunscreen and amount of body surface covered with clothing [11]. Few amount of vitamin D can be obtained from the diet that is rich in calcium such as milk and dairy products such as cheese, egg yolk, beef liver, sardines, cod liver oil, tuna fish, sword fish, fruits like oranges, fortified cereals etc. Vegetarians and people with a vegan diet are at higher risk for a deficiency [12-13].

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BONE MINERAL DENSITY IN KATNI ADOLESCENTS: RELATION TO THEIR NUTRIENT INTAKE AND PHYSICAL ACTIVITY

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Abstract
Katni is the small district of Madhya Pradesh and the present study of Bone Mineral Density was conducted on the adolescent population of this region. The objective of the study was to determine the bone health of the adolescent population and to create awareness regarding the nutrition intake and physical fitness to maintain the optimum BMD. The subjects under study were mainly girls who are very conscious about their body weight and to remain lean and thin stick to low food intake. They are also very sensitive regarding skin colour and hence keep themselves covered to avoid exposure to the sun, which may cause tanning. These practices lower the bone mineral density to critical levels which may lead to several health-related complications at a later age. In the present study, efforts were made to educate the adolescent population regarding the importance of proper diet and physical activity to maintain normal BMD. The present study reviewed the work of few authors in the field of nutrition and food science and the databases searched were PubMed, CINAHL, Science Direct, Cochrane library, SpringerLink and Wiley online Library. The indigenous work of the author was to test the null hypothesis that there is no role of physical activity and nutritional intake in affecting bone mineral density.

Keywords: Bone health, BMD, Physical activity, Nutrition, adolescents

Introduction

The maintenance of adequate bone health in adolescent requires proper nutrition with appropriate calcium and vitamin D intake and it is also recommended that they participate in regular physical activity.[1] In the population under study, these dual goals were not being achieved by most adolescents. To understand the importance of physical activity and nutrition in relation to bone health in teenagers, routine health care assessments should be carried out. The nutritional status of the adolescents is very important as it decides the future health and wellbeing of an individual. Therefore, the routine adolescent health care requires to determine the calcium intake of the individual and also to screen the family for the history of osteoporosis.

While acquiring the adult structure, the framework of an individual undergoes extensive changes and the skeleton modifies and attains a peak bone mass.[2] The bone mass is mainly determined by the physical activity specially which involves the weight-bearing activity. Multiple studies on the active group of children involved in sports and athletics like tennis players and gymnasts have demonstrated an association between physical activity and a BMD. [3-7] Besides physical activity, adequate nutrition also helps in maintaining bone growth and mineralization. The deposition of minerals helps in increasing the bone mass and BMD can be increased to 20% with proper diet and exercise.[8] The growth and development of the skeleton occurs at the maximum rate during childhood and adolescence and at this stage of life much bone is formed rather lost while in the later stages of life the reverse happens and more bone tissue is lost than formed and that is why the optimum nutrition and physical activity during this stage of life helpsin maintaining the proper bone health. The mass of the bone is formed through the coordinated functions of two kinds of cells known as osteoblasts and osteoclasts. The mesenchymal cells that differentiate in muscles, fibrous tissues, adipocytes and cartilage form the osteoblasts or bone cells. The other types of cells that are

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TRADITIONAL HERBAL REMEDIES PRACTICED BY THE HERBAL HEALERS IN THE TRIBAL REGIONS OF MADHYA PRADESH : A REVIEW

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ABSTRACT

Plants have been well documented for their medicinal uses for thousands of years and traditional medicines are still a major part of habitual treatments of different maladies in different parts of the world. In recent years, there has been growing interest in alternative therapies and the therapeutic use of natural products, especially those derived from plants. Plants are considered as one of the main sources of biologically active materials. Phyto-chemical screening of medicinal plants has contributed a great deal for the discovery of new drugs. A number of medicinal plants have been subjected to detailed chemical investigations and this has led to the isolation of pure bioactive molecules which have been pharmacologically evaluated. As a result, new drugs have been discovered, along with new applications.

INTRODUCTION

The therapeutic use of herbs is as old as human civilization and has evolved along with it. Local practitioners have used indigenous plants and herbs for centuries all over the world to treat a variety of ailments and these have exhibited clear pharmacological activities. Historically, herbal drugs were used as tinctures, poultices, powders and teas followed by formulations, and lastly as pure compounds. Across the cultures, knowledge about use of medicinal plants exists in the form of local folklore available with families, tribes and cultures, handed down from generation to generation. Medicinal plants or their extracts have been used by humans since time immemorial for different ailments and have provided valuable drugs such as analgesics (morphine), antitussives (codeine), antihypertensives (reserpine), cardiotonics (digoxin), antineoplastics (vinblastine and taxol) and antimalarials (quinine and artemisinin). Medicinal plant drug discovery continues to provide new and important leads against various pharmacological targets including cancer, malaria, cardiovascular diseases and neurological disorders. Plants have proven to be a novel source for bioactive natural products. They have evolved and adapted over millions of years to withstand bacteria, insects, fungi and weather to produce unique, structurally diverse secondary metabolites. Their ethno pharmacological properties have been used as a primary source of medicines for early drug discovery. According to the World Health Organization (WHO), 80% of people still rely on plant-based traditional medicines for primary health care (Farnsworth et al., 1985) and 80% of the plant derived drugs were related to their original ethno pharmacological purpose. Natural products have been used since ancient times and in folklore for the treatment of many diseases and illnesses. They have been the source of most of the active ingredients of medicines. This is widely accepted to be true when

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MAINTENANCE OF FISH HEALTH IN AQUACULTURE : REVIEW

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ABSTRACT

Aquaculture is rapidly growing part of agriculture worldwide. It makes up around 44 percent of total fish production globally. This increased growth of production is achieved despite facing many challenges in the aquaculture environment. Among production limiting challenges, the infectious disease takes the lion share by causing multibillion-dollar loss annually. To reduce the impact of the fish disease, it is necessary to address health constraints based on scientifically proven and recommended ways. This review aims at pointing out some of the best approaches to prevention and control of infectious disease in aquaculture. Among the effective prevention and control strategies, vaccination is one of the key practices. Types of vaccines for use in fish include killed vaccines, attenuated vaccines, DNA vaccines, recombinant technology vaccines, and synthetic peptide vaccines. Administration techniques of vaccines in fish include oral, injection, or immersion methods. Antibiotics are also in use in aquaculture despite their side effects in the development of drug resistance by microorganisms. Biological and chemical disease control strategies such as using probiotics, prebiotics, and medicinal plants are widely in use. Biosecurity measures in aquaculture can keep the safety of a facility from certain disease-causing agents that are absent in particular system. Farm-level biosecurity measures include strict quarantine measures, egg disinfection, traffic control, water treatments, clean feed, and disposal of mortalities. In conclusion, rather than trying to treat every disease case, it advisable to follow a preventive approach before the event of any disease outbreaks.

INTRODUCTION

Fisheries play a great role in food security and livelihood and are a source of income and social development in developing countries [1]. Recently the sector attracted great attention and it is growing rapidly through the development of aquaculture [2]. New technological advances and increased demands for fish as a source of animal protein are the main reasons for the industry's growth. Because of expansion of the industry, the culture methods have become more intensive for producing higher yields [3]. Aquaculture production of fish makes up forty-four percent of total fish production in 2014 which is 74 million tons of fish worth of 160 billion dollars. Almost all fish produced from aquaculture is for human consumption [1]. Huge loss of production in aquaculture is occurring because of many reasons. Among these causes, a disease is the most serious constraint that causes damage to the livelihood of farmers, loss of job, reduced incomes, and food insecurity. Studies showed that almost fifty percent of production loss is because of diseases which are more severe in developing countries. This is because ninety percent of the aquaculture firm is in the developing world. The annual loss of revenues because of disease reaches up to 6 billion dollars. For instance, in Chile, infectious salmon anemia alone costs 2 billion dollars and caused 20000 workers to lose their jobs. In China, one of the leading countries in aquaculture production has a loss of 15 percent of the total fish

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CORONAVIRUS DISEASE - 2019 (COVID-19) : A REVIEW

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ABSTRACT

There is a new public health crises threatening the world with the emergence and spread of 2019 novel coronavirus (2019-nCoV) or the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). The virus originated in bats and was transmitted to humans through yet unknown intermediary animals in Wuhan, Hubei province, China in December 2019. There have been around 96,000 reported cases of coronavirus disease 2019 (COVID-2019) and 3300 reported deaths to date (05/03/2020). The disease is transmitted by inhalation or contact with infected droplets and the incubation period ranges from 2 to 14 d. The symptoms are usually fever, cough, sore throat, breathlessness, fatigue, malaise among others. The disease is mild in most people; in some (usually the elderly and those with comorbidities), it may progress to pneumonia, acute respiratory distress syndrome (ARDS) and multi organ dysfunction. Many people are asymptomatic. The case fatality rate is estimated to range from 2 to 3%. Diagnosis is by demonstration of the virus in respiratory secretions by special molecular tests. Common laboratory findings include normal/low white cell counts with elevated C-reactive protein (CRP). The computerized tomographic chest scan is usually abnormal even in those with no symptoms or mild disease. Treatment is essentially supportive; role of antiviral agents is yet to be established. Prevention entails home isolation of suspected cases and those with mild illnesses and strict infection control measures at hospitals that include contact and droplet precautions. The virus spreads faster than its two ancestors the SARS-CoV and Middle East respiratory syndrome coronavirus (MERS-CoV), but has lower fatality. The global impact of this new epidemic is yet uncertain.

Keywords : 2019-nCOV, SARS-CoV-2, COVID-19, Pneumonia, Review

INTRODUCTION

The 2019 novel coronavirus (2019-nCoV) or the severe acute respiratory syndrome corona virus 2 (SARS-CoV-2) as it is now called, is rapidly spreading from its origin in Wuhan City of Hubei Province of China to the rest of the world [1]. Till 05/03/2020 around 96,000 cases of coronavirus disease 2019 (COVID-19) and 3300 deaths have been reported [2]. India has reported 29 cases till date. Fortunately so far, children have been infrequently affected with no deaths. But the future course of this virus is unknown. This article gives a bird's eye view about this new virus. Since knowledge about this virus is rapidly evolving, readers are urged to update themselves regularly.

HISTORY

Coronaviruses are enveloped positive sense RNA viruses ranging from 60 nm to 140 nm in diameter with spike like projections on its surface giving it a crown like appearance under the electron microscope; hence the name coronavirus [3]. Four corona viruses namely HKU1, NL63, 229E and OC43 have been in circulation in humans, and generally cause mild respiratory disease. There have been two events in the past two decades wherein crossover of animal betacorona viruses to humans has resulted in severe disease. The first such instance was in 2002–2003 when a new coronavirus of the β genera and with origin in bats crossed over to humans via the intermediary host of palm civet cats in the Guangdong province of China. This virus, designated as severe acute respiratory syndrome coronavirus affected 8422 people mostly in China and Hong Kong and caused 916 deaths (mortality rate 11%) before being contained [4]. Almost a decade later in 2012, the Middle East respiratory syndrome coronavirus (MERS-CoV), also of bat origin,

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GAL AND PARASITIC INFECTIONS IN FRESH WATER EDIBLE FISHES IN CENTRAL INDIA : A STUDY

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h constitutes half of vertebrates in the world. Fishes are totally dependent upon quality of water with spect to breathing, feeding, growth, excretion, maintenance of salt balance, and also for reproduction. ater quality is the first and most important limiting factor in existence of fish in any aquatic ecosystem. Fish lay an important role in human diet as well as emerged as major model of organisms for different iomedical researches. Fishes are one of the important vertebrate which provides protein rich food for human and several animals and important element of aquatic food chain, nutrient cycle and ecosystem services. They also generate employment and provide aesthetic as well as recreational value for several countries. Fish farming in various parts of the world has increased many folds in the last decade. As a result, fish culture has now become commercially an important industry worldwide. Some important genera found in M.P. included Catla calta, Channa, Cirrihinus, Clarius, Ctenopharyngodon, Cyprinus, Heteropneustas, Labeo, Mastacembalus, Mystus, Notopterus, Ompak, Puntius, Rita, Wallago, Xenentodon.

FUNGAL AND PARASITIC INFECTIONS OF FISHES

Similar to other animals, fishes also suffer from various types of diseases. All fishes carry pathogens and parasites. Fungal and parasitic infections of fish harmed fisheries and aquaculture. These infections in fishes cause damages on various parts of their body (Refai et al., 2010). Gopalkrishnan, 1963 and 1964 reported that in India, the rise in disease has been mainly observed in major carps cultured in the various parts of country. In India fishermen is facing serious problems with fungal and parasitic diseases. Therefore, diseases cause high mortality, which results in production and economic losses. Study of fungal infections in fresh water fish is of great significance (Rahman and Chowdhury, 1996; Chowdhury, 1998; Sarker et al., 1998; Rahman et al., 1998; Majumder et al., 2001 and Laharia, 2006). Fungi which are responsible for a number of diseases are present in fresh water. Fungal infections are mainly caused due to immune suppression. Fungi can attack fishes of all the ages and it can also prevent successful hatching when it invades fish eggs. Among numerous aquatic fungi, species of Oomycetes have special importance because of their effect on fish health.

The most common fish disease included Columnaries gill disease, itch disease, dropsy tail fin rot, fungal infections, white spot disease, pop eyed disease, cloudy eye, swim bladder disease, anorexia, tuberculosis, hexamita hole in head disease and lateral line erosion; these are injurious or may be lethal to fish. Some external parasites found on gills included leeches, larvae and gnathid isopods. Cymothoa exigua is parasite on spotted rose, snapper lutjanus gutates Cymathoa exigua is a parasitic crustacean which destroys gills and its tongue. Other parasitic disorders and parasites include Gyrodactylus Selaries Ichthyopthrius multifilies, Cryptocaryon, disease, Brooklynella hostiles, Hole in the Head, Glugea, Ceratomyxa Shasta, Khudoa thyrasites, Tetracapsuloides Bryosalmonae, Cymothoa exigua, Leeches, Nematode, Flukes, carp lice and salmon lice. Parasites are considerably harmful to organism.

Parasites are extremely abundant and diverse in nature, representing a substantial portion of global biodiversity. Fishes are important from ecological, medicinal, nutritional, pharmaceutical and economical point of view. These fishes are parasitized by Helminthes parasites, which reduce the food value of host fish. Therefore study of Helminthes is an urgent necessity today. These Helminthic infection leads to various disorders i.e., Anemia. So it is necessary to provide data for the prediction of integrated methods to achieve the regulation of numbers of harmful parasites (Kennedy, 1974).

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CURRENT INSIGHT TO THE USES OF INDIAN SNAKE ROOT *Rauwolfia serpentina*

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ABSTRACT
ncrease in world population poses huge challenges to satisfy the need for food, shelter and cloth. There is a rise in demand for medicine, as millions of people are suffering from various types of diseases worldwide. There are several pharmaceutical formulations available commercially for the treatments of disorders but they are costly, not effective and show numerous toxic effects. Therefore, there is an urgent need for us to use an alternate, naturally available medications or herbal remedies which do not show any side effects. Over 80 % of world population are dependent on herbal medicine for its therapeutic effects and more than 800 plant species shows hypoglycaemic activity. Rauwolfia serpentina is an Indian medicinal plant and is a safe and effective treatment for poisonous reptiles. The plant was used by many physicians throughout India in the 1940s and then was used throughout the world in the 1950, including in the United States and Canada. It fell out of popularity when adverse side effects, including depression and cancer, become associated with it. In this review we focus on the use of Rauwolfia and treatment for many diseases, its botany, chemistry and mode of action with special emphasis on the plants role in treating high blood pressure and hypertension, and also critically examining its adverse side effects, toxicology and carcinogenicity.
Keywords: Rauwolfia serpentina, Reserpine, Indole-Alkaloids, Potent, Antihypertensive, Herbal remedy, Medicinal plant.

INTRODUCTION
Rauvolfia serpentina is an important medicinal plant in the pharmaceutical world due to the presence of its immense therapeutic properties. The plant is known for curing various disorders because of the presence of alkaloids, carbohydrates, flavonoids, glycosides, phlobatannins, phenols, resins, saponins sterols, tannins and terpenes. The plant parts, root and rhizome have been used since centuries in Ayurvedic medicines for curing a large number of diseases such as high blood pressure, mental agitation, epilepsy, traumas, anxiety, excitement, schizophrenia, sedative insomnia and insanity. The plant contains more than 50 different alkaloids which belong to the monoterpenoid indole alkaloid family. The major alkaloids are ajmaline, ajmalicine, ajmalimine, deserpidine, indobine, indobinine, reserpine, reserpiline, rescinnamine, rescinnamidine, serpentine, serpentinine and yohimbine. R. serpentina is also known for its antimicrobial, antifungal, anti-inflammatory, antiproliferative, antidiuretic and anticholinergic activities. The herbal medicine is still the basis of primary health care for 75–80% of the world population because of its cultural acceptability, better compatibility with the human body and lesser side effects. Therefore, there is a need for us to search alternative, naturally available remedies for curing million's of people worldwide. Due to all these properties, the present

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IMPACT OF HERBAL DRUGS AND ITS CLINICAL APPLICATION

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Since ancient times until now exploring the importance of herbal medicines to treat the variety of diseases. Currently the herbal medicines searching for health, wellness and aim to achieve effective treatment without much side effect. Recent days the impact of herbal medicines well established even herbal treatment is one of the alternative medicines for most of the diseases such as hyperlipidemia, diabetes mellitus etc. Medicinal plants always have been rich sources of bioactive compounds, and that will be very helpful to human health. The reasons for herbal medicines attracted by the health care professionals and common individuals, including concern about confidence and safety of drugs. Allopathic medicines have many side effects and some- times failing to treat and most of the herbal drugs proven better therapeutic effects without any major adverse effects. With the demand for phytomedicine user, this review highlights modern herbal drug formulation and its clinical use.

INTRODUCTION

The recognition of the herbal drugs day to day increasing and arriving new formulations in the market. A number of the pharmaceutical industry to introduce herbal products because of public demand and safety of the therapy. The rational use of herbal medicine is very limited adverse effects and traditionally practicing since long years ago to treat disease, but there is no documented evidence. In this regard, recent years documenting many of the herbal drugs with scientific support (Chikezie and Ojiako, 2015; Vetriselvan et al., 2018). Many documented evidence of Indian system of medicines such as Siddha and traditional medicines of Unani and Ayurvedic. The caution of herbal medicines is very important and if using inappropriately to cause serious health issues even lethal. While the use of herbal medicines needs more documentary evidence and should be nontoxic with minimal or no side effects. Some of the herbal drugs having a more poisonous effect, then a beneficial effect. One of the global issues is poor quality due to contamination of heavy metals and poisonous substances (Ernst, 2005). Moreover, it needs proper guidelines to investigate the herbal medicines.

This is very helpful to treat multiple disease conditions without harming effects. Hundreds of polyherbal formulations are available in the market for the management of different disease conditions such as metabolic diseases and dermatological infections. Majority of formulations is more than eight drug combination, the main issues are arising from the standardization of drugs and quality. So need further investigations on quality control. The direction of food and drug administration suggests that the polyherbal formulation should be less than three drugs (Rao, 2000). The herbal system of treatment is very broad and influence their action of a variety of disease conditions including anti hyperlipidemia and cardiac protection. Due to the poor absorption of plant based products, the re searchers are developing new formulation and approach numerous methods to overcome the issue of rapid metabolism and systemic elimination. Moreover, the plant drug of biologically active constituents mostly soluble in water. The plant drug molecules are a large size and can't easily be absorbed by passive diffusion, and this has low lipid solubility. The newer formulation of plant drugs aims to achieve rich penetration of biomembrane (Yang et al., 2008). However, developing new drug formulations of pharmaceutical research able to solve the scientific needs, including absorption, distribution, metabolism, binding of receptor sites, mechanism of action and appropriate dosage form. Herbal drugs merging with a novel drug delivery system and to improve their systemic action. The novel system incorporated such as nanoparticles, matrix system, liposomes and microemulsions etc. Additionally, the improvement of herbal drug formulations mainly focuses on regulatory measures and quality control as follows

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RESURRECTING HERB 'SANJEEVANI' (*Selaginella bryopteris*) ETHNOMEDICINAL USES : AN OVERVIEW

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ABSTRACT

Resurrection plants are nature's wonder with a unique water stress tolerant capacity. This study is an overview of resurrection plant Selaginella bryopteris, a pteridophyte with lithophyte habitat, its distribution, characteristics, constituents and its ethnomedicinal uses. Most of the characters except few find this species close to the mythological'Sanjeevani booti'. Further, its scope in the field of genetic engineering, pharmacology and medicines are also analysed. More research is required to identify various other similar plant species with a potentiality to prepare drug formulations to fight chronic diseases and to develop engineered plant with drought tolerance capacity.

Keywords : *Resurrection plants, sanjeevani, ethnomedicine, climatic change.*

INTRODUCTION

Selaginella bryopteris (L.) Bak, commonly known as 'Sanjeevani', a pteridophyte with remarkable resurrection capabilities, being able to survive even without water reported to be distributed in Kailas and Rishabh mountain in the Himalayan region, and also from Dronagiri Hills Joshimath and Kumaon [1] and Garhwal in Uttaranchal. Some studies reported the species from Arawali Mountain terrains running east to west [2], Uttar Pradesh, Orissa [3] and even in Madhya Pradesh from Nimar [4] Satpura Hills mainly Hoshangabad, Amarkantak, Jabalpur, Mandla, Chhindwara, Betul and Sehore regions [5]. The herb does not die, even under water stress condition and just curls up and loses colour, turning to brown in the absence of moisture and regain its original color within hours of coming in contact with water. In recent years several investigations has been carried out to correlate this species with'Sanjeevani booti' (Life giving herb) a wonder herb mentioned in great epic 'ValmikiRamayana' [3, 6, 7] that exists in Mount Rishabha Indian Himalayas with unique bioluminescence and resurrection property. According to the available literature the plantexisted in four categories Mrithasanjeevani (Sanjeevani that restores life), Vishalyakarini (arrow remover), Savarnyakarani, (color restorer that reset fractured bones and enhances skin glow) and Sandhanakarani, (fame restorer) (Valmiki Ramayana, Yuddh kand- Sarga 74).The archeological sciences believes the existence of the herbs as a group of ferns known tobelong to Carboniferous period, about 300 million years back, and were the first vascular plants pioneered on the earth [3]. The evaluation of a series of herbs existing in hilly tracts with lookalike features [8] makes this species closer to the original one. Although several researcher strongly condemn this hypothesis as the species do not exhibit bioluminescence property [7], however the distribution, morphology and physiological similarities increases possibility for this pteridophyte and other allied species [8] to make ease for the existence of miracle herb'Sanjeevani booti'

SCOPE IN GENETIC ENGINEERING

Resurrection plants the desiccation tolerance involves an integration of molecular genetic mechanisms, antioxidant and metabolic systems[10] This specificity can be exploited using molecular biological engineering strategies for improving plant drought tolerance in crops[11]. The plants also have potentiality to be exploited in drug industry. Most predictable, during deciccation phase the science of genetic engineering can be employed to synthesize secondry compounds from the plant that possess

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CERTIFICATE

OF ACHIEVEMENT

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ASHWAGANDHA : A RASA□ANA (REJUVENATOR) OF A□URVEDA

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INTRODUCTION

Ashwagandha (Withania somnifera, fam. Solanaceae) is commonly known as "Indian Winter cherry□ or "Indian Ginseng□. It is one of the most important herb of Ayurveda (the traditional system of medicine in India) used for millennia as a Rasayana for its wide ranging health benefits. Rasayana is described as an herbal or metallic preparation that promotes a youthful state of physical and mental health and expands happiness. These types of remedies are given to small children as tonics, and are also taken by the middle-aged and elderly to increase longevity. Among the ayurvedic Rasayana herbs, Ashwagandha holds the most prominent place. It is known as "Sattvic Kapha Rasayana□ Herb (Changhadi, 1938). Most of the Rasayana herbs are adaptogen / anti-stress agents.

Ashwagandha is commonly available as a churna, a fine sieved powder that can be mixed with water, ghee (clarified butter) or honey. It enhances the function of the brain and nervous system and improves the memory. It improves the function of the reproductive system promoting a healthy sexual and reproductive balance. Being a powerful adaptogen, it enhances the body's resilience to stress. Ashwagandha improves the body's defense against disease by improving the cell-mediated immunity. It also possesses potent antioxidant properties that help protect against cellular damage caused by free radicals.

CHEMICAL COMPOSITION

The biologically active chemical constituents of *Withania somnifera* (WS) include alkaloids (isopelletierine, anaferine, cuscohygrine, anahygrine, etc.), steroidal lactones (withanolides, withaferins) and saponins (Mishra, 2000 et al., 2000). Sitoindosides and acylsterylglucosides in Ashwagandha are anti-stress agents. Active principles of Ashwagandha, for instance the sitoindosides VII-X and Withaferin-A, have been shown to have significant anti-stress activity against acute models of experimental stress (Bhattacharya et al., 1987). Many of its constituents support immunomodulatory actions (Ghosal et al., 1989). The aerial parts of *Withania somnifera* yielded 5-dehydroxy withanolide-R and withasomniferin-A (Atta-ur-Rahman et al., 1991).

CLASSICAL USES OF ASHWAGANDHA

Ayurveda, the traditional system of medicine practiced in India can be traced back to 6000 BC (Charak Samhita, 1949). For most of these 6000 years Ashwagandha has been used as a Rasayana. The root of Ashwagandha is regarded as tonic, aphrodisiac, narcotic, diuretic, anthelmintic, astringent, thermogenic and stimulant. The root smells like horse ("ashwa□, that is why it is called Ashwagandha (on consuming it gives the power of a horse). It is commonly used in emaciation of children (when given with milk, it is the best tonic for children), debility from old age, rheumatism, vitiated conditions of vata, leucoderma, constipation, insomnia, nervous breakdown, goiter etc. (Sharma, 1999). The paste formed when roots are crushed with water is applied to reduce the inflammation at the joints (Bhandari, 1970). It is also locally applied in carbuncles, ulcers and painful swellings (Kritikar and Basu, 1935). The root in combination with other drugs is prescribed for snake venom as well as in scorpion-sting. It also helps in leucorrhoea, boils, pimples, flatulent colic, worms and piles (Misra, 2004). The Nagori Ashwagandha is the supreme among all Ashwagandha varieties. Maximum benefit appears when fresh Ashwagandha powder is used (Singh, 1983). The leaves are bitter and are recommended in fever, painful swellings. The flowers are astringent, depurative, diuretic and aphrodisiac. The seeds are anthelmintic and combined with astringent and rock salt

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STANDARDIZATION OF HERBAL MEDICINES : OVERVIEW

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ABSTRACT
The world is witnessing an unprecedented growth in the usage of herbal products. India is a mother hub for natural herbs based science. Herbal drug technology is used for converting botanical materials into medicines, where standardization and quality control with proper integration of modern scientific techniques and traditional knowledge is important. For global harmonization WHO specific guidelines for the assessment of the safety, efficacy and quality of herbal medicines are of utmost importance. Standardization of drug means confirmation of its identity, quality and purity throughout all phases of its cycle. An overview covering the different techniques involved in standardization of crude/ finished compound drugs so far, e.g. macroscopic methods, microscopic methods, physical methods, chemical methods, biological methods.

KEY WORDS : WHO, Herbal medicine, Standardization, Quality control.

INTRODUCTION

The basic resources of medicines come from nature and they are used as medicaments from ancient time to present day. People around the world possess unique knowledge of the natural resources on which they depend, including tremendous botanical expertise. The traditional medicines cater about 85% of the world population for their health needs. It is essential to maintain safety, quality and efficacy of the plant and their products to avoid and serious health problems[1]. Indian healthcare consists of medical pluralism and ayurveda still remains dominant compared to modern medicine, particularly for treatment of a variety of chronic disease conditions[2]. WHO defines traditional medicine as including diverse health practises, approaches, knowledge and beliefs incorporating plant, animal and/or mineral based medicines, spiritual therapies, manual techniques and exercises applied singularly or in combination to maintain well being, as well as to treat, diagnose or prevent illness. WHO has provided some terms related to herbal drugs, according to their definitions. Herbal medicines include herbs, herbal materials, herbal preparations and finished herbal products. In some countries herbal medicines may contain, by tradition, natural organic or inorganic active ingredients that are not of plant origin (e.g. animal and mineral materials). Herbs include crude plant material, such as leaves, flowers, fruit, seeds, stems, wood, bark, roots, rhizomes or other plant parts, which may be entire, fragmented or powdered. Herbal materials include, in addition to herbs, fresh juices, gums, fixed oils, essential oils, resins and dry powders of herbs. In some countries, these materials may be processed by various local procedures, such as steaming, roasting or stir-baking with honey, alcoholic beverages or other materials. Herbal preparations are the basis for finished herbal products and may include comminuted or powdered herbal materials, or extracts, tinctures and fatty oils of herbal materials. They are produced by extraction, fractionation, purification, concentration, or other physical or biological processes. They also include preparations made by steeping or heating herbal materials in alcoholic beverages and/or honey, or in other materials. Finished herbal

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APHRODISIAC PLANTS USED BY GOND AND BAIGA TRIBE OF CENTRAL INDIA: AN OVERVIEW

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ABSTRACT

The forest of the Central India provide a large number of plants whose fruits, seeds, tubers shoots, leaves etc. make important contribution to the diet of tribals. These plants not only provide inexpensive food but several other useful products like medicine, fiber, fodder, dyes etc. They also provide useful genus for crop improvement. The study of medicinal plants is important not only to identify the potential sources which could be utilized as alternative herbal medicines or in time of scarcity but to select promising types for domestication. Recently the role of ethno botanical studies in trapping the old traditional folk knowledge as well as in searching new plant sources of food, drug etc. In this review we gave general overview of Aphrodisiac Plants of Central India.

KEYWORDS: Medicinal Plant, Ethno-botanical, Aphrodisiac, Central India.

INTRODUCTION

According to WHO (World Health Organization, 2001) about 80% of the world's population, especially in the rural areas depends on herbal medicine for their healthcare needs. The ethnic people residing in different geographical belts of India depend on wild plants to meet their basic requirements and all the ethnic communities have their own pool of secret ethnomedicinal and ethnopharmacological knowledge about the plants available in their surroundings. The local plant resources are the principal source of medicine and are used by the traditional herbal healers. Hundreds of plants growing in forests are used as source of medicines throughout the world. Some of the plants have pharmacological properties while the others are used in indigenous medicine. Most of these plants has occupied an important place in traditional as well as in modern medicine system. Ayurveda is the basis and foundation of ancient medicinal system of drugs derived from plant species the system like Ayurveda, Unani, Siddha, and homeopathy have been utilizing about more than 200 plant species for medicinal purposes. These medicinal systems have attained a great importance these days, owing to side effects caused by synthetic drugs. In Indian Materia-Medica, 2000 drugs have been extracted from 1800 plants forest origin. Aphrodisiac is the word derived from Aphrodite, the Greek goddess of sexual, love and beauty. An aphrodisiac is defined as an agent (food or drug) that arouses sexual desire. From time immemorial man's endeavor have been to increase his sexual powers. When man did not know metals and used only stones he exhibited his sexual powers by ritual dances accompanied by hunting. This lead early man was motivated by his quest for food, sex and self-preservation. The possibility of bioactive aphrodisiacs which may be derived from plants, animals or minerals, has been attractive throughout

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THERAPEUTIC APPLICATIONS OF HERBAL MEDICINES FOR CANCER

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ABSTRACT

Cancer is a general term applied to abnormal growth of cells that starts to grow and propagate through uncontrolled cell division and gradually expand throughout body and finally lead to death by invading and destroying normal cells. It is a major public health burden worldwide. Plant derived agents are being used for the treatment of cancer. Common treatments such as radiotherapy and chemotherapy can cause some complications. Worldwide effects are ongoing to identify new anticancer compounds from plants. In recent years owing to the fear of side effects people prefer more and more use of natural plant products for cancer. Medicinal plants are potent natural sources of drugs to treat different human inflammations since ancient time. It will provide a new way to explore the therapeutic value of plants and characterization of biologically active compounds from them that may lead towards developing anticancer drugs and proper treatment of cancer. According to results of this study, herbal extracts have antioxidant compounds that can induce apoptosis and inhibit cell proliferation by the investigated mechanisms. It will be helpful to explore the medicinal value of the plants and for the new drug discovery from them for the researchers and scientists around the globe.

KEYWORDS: Medicinal plants, anticancer agents, Indigenous knowledge, bioactive compounds.

INTRODUCTION

Cancer is an important health problem in developing and developed countries. It is one of the major causes of death in the world, and it is the second leading cause of mortality after cardiovascular diseases (WHO, 2005). Cancer starts with the deformation of a natural cell caused by genetic mutations in DNA. This abnormal cell reproduces in an abnormal way by asexual reproduction, that is, it ignores signals related to regulation of cell's growth around it, those defective cells might multiply to form a lump of abnormal tissue called a tumour which obtains invasion characteristics and causes changes in surrounded tissues (Smeltzer et al., 2010). Nowadays, various methods are used for cancer treatment such as chemotherapy, but in this method, because of non-selectivity of medicines, a high percentage of healthy cells will be lost with cancer cells. In order to prepare anticancer medicines from natural resources like plants, testing cytotoxic compounds and screening raw extracts of plants is necessary (Rafieian and Nasri, 2015). Therefore, availability of natural products with higher effectiveness and lower side effects is desired (Lachenmayer et al., 2010). Medicinal herbs are important for cancer treatment due to their multiple chemical compounds for discovering new active materials against

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GENERAL OVERVIEW OF MEDICINAL PLANTS

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ABSTRACT
Medicinal plants have been playing an essential role in the development of human culture. As a source of medicine, Medicinal plants have always been at forefront virtually all cultures of civilizations. Medicinal plants are regarded as rich resources of traditional medicines and from these plants many of the modern medicines are produced. For thousands of years medicinal plants have been used to treat health disorders, to add flavor and conserve food and to prevent diseases epidemics. The secondary metabolites produced by the plants are usually responsible for the biological characteristics of plant species used throughout the world. The microbial growth in diverse situations is controlled by plant derived products. In this review we gave general overview of the medicinal plants.
KEYWORDS : Medicinal plant, Secondary metabolites, Drugs.

INTRODUCTION

Human beings have depended on nature for their simple requirements as being the sources for medicines, shelters, food stuffs, fragrances, clothing, flavours, fertilizers and means of transportation throughout the ages. For the large proportions of world's population medicinal plants continue to show a dominant role in the healthcare system and this is mainly true in developing countries, where herbal medicine has continuous history of long use. The development and recognition of medicinal and financial aids of these plants are on rise in both industrialized and developing nations. The foundations of typical traditional systems of medicine for thousands of years that have been in existence have formed from plants. The plants remain to offer mankind with new medicines. Some of the beneficial properties ascribed to plants have recognised to be flawed and medicinal plant treatment is based on the experimental findings of hundreds to thousands of years. The earliest reports carved on clay tablets in cuneiform date from about 2600 BC are from Mesopotamia; among the materials that were used were oils of Commiphora species (Myrrh), Cedrus species (Cedar), Glycyrrhiza glabra (Licorice), Papaver somniferum (Poppy juice) and Cupressus sempervirens (Cypress) are still used today for the cure of diseases extending from colds and coughs to inflammation and parasitic infections. The traditional medicine practice is widespread in China, India, Japan, Pakistan, Sri Lanka and Thailand. About 40% of the total medicinal consumption is attributed to traditional tribal medicines alone by China. In Thailand, herbal medicines make use of legumes encountered in the Caesalpiniaceae, the Fabaceae, and the Mimosaceae. It is estimated that in mid-90s, more than US$2.5 billion have resulted from the sales of herbal medicines. The herbal medicinal preparations are more in demand than mainstream pharmaceutical products in Japan. In diversified industries the contribution of plants is remarkable such as fine chemicals, cosmetics, pharmaceuticals and drugs and industrial raw materials etc. For the development of new drug discovery medicinal plants perform a dynamic part. Medicinal plants have proved their sole role in coping with a number of deadly diseases including cancer and the diseases associated with viral onslaught viz. Hepatitis, AIDS etc. In the USA drug market approx. 100 plant made new drugs were presented during 1950-1970 which includes vincristine, reseinnamine, vinblastin, deseridine and reserpine which are from different plants. During 1971-1990 fresh medicines i.e., artmisinin, Zguggulsterone, ginkgolides, lectinam, E-guggulsterone, teniposide, ectoposide, plaunotol and nabilone appeared all around the world. The 2% medicines which were presented during

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Tinospora cordifolia : ONE PLANT, MANY ROLES

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Tinospora cordifolia commonly named as "Guduchi" in Sanskrit belonging to family Menispermaceae is a genetically diverse, large, deciduous climbing shrub with greenish yellow typical flowers, found at higher altitude.[1–3] In racemes or racemose panicles, the male flowers are clustered and female are solitary. The flowering season expands over summers and winters.[4] A variety of active components derived from the plant like alkaloids, steroids, diterpenoid lactones, aliphatics, and glycosides[4] have been isolated from the different parts of the plant body, including root, stem, and whole plant. Recently, the plant is of great interest to researchers across the globe because of its reported medicinal properties like anti-diabetic, anti-periodic, anti-spasmodic, anti-inflammatory, anti-arthritic, anti-oxidant, anti-allergic, anti-stress, anti-leprotic, anti-malarial, hepatoprotective, immunomodulatory and anti-neoplastic activities. In this review, we focus our attention to: (i) the reported genetic diversity in the Plant (ii) biological roles reported in humans and animals and active components from the plant. (iii) biological roles reported in humans and animals.

(i) Tinospora cordifolia: A genetically diverse plant

Reports on studies of morphological and physiological characters of the plant, including plant length, stem diameter, growth habit, floral morphology, flower color, stomatal density, trichomal density, lenticels density, petiole length, plant biomass, and other characteristics of the plant and diversity in the genetic components identified by markers have indicated the diversity in the medicinal plant which has profound importance for efficient and effective management of plant genetic resources. Reports using markers for random amplified polymorphic DNA,[5] and inter-simple sequence repeat primers [1,5] have pointed toward the genetic variation within the population. However, reports on conservation strategies and propagation of the germplasm are few.

(ii) Tinospora cordifolia: Biological roles

A myriad of biologically active compounds, including alkaloids, diterpenoid lactones, glycosides, steroids, sesquiterpenoid, phenolics, aliphatic compounds, and polysaccharides have been isolated from different parts of the plant body [4–39]. These compounds have been reported to have different biological roles in disease conditions thus enabling potential application in clinical research. *Tinospora cordifolia* extracts are extensively used in various herbal preparations for the treatment of different ailments for its anti-periodic, anti-spasmodic, anti-microbial, anti-osteoporotic, anti-inflammatory, anti-arthritic, anti-allergic, and anti-diabetic properties[6] .

IMMUNOMODULATORY PROPERTY

The immuomodulatory property of *Tinospora cordifolia* is well documented.[40–42] Active compounds 11-hydroxymustakone, N-methyl-2-pyrrolidone, N-formylannonain, cordifolioside A, magnoflorine, tinocordiside and syringin [6] has been reported to have potential immunomodulatory and cytotoxic effects.[13,40–42] They have been reported to function by

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STUDIES OF ASHWAGANDHA (*Withania somnifera* Dunal)

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W. somnifera Dunal (Solanaceae), also known as Ashwagandha or winter cherry, is one of the most valuable plants in the traditional Indian systems of medicine. It is a small evergreen shrub that grows to roughly four to five feet tall. In India, it is cultivated, on a commercial scale, in the states of Madhya Pradesh, Uttar Pradesh, Punjab, Gujarat and Rajasthan [1]. This plant is used in more than 100 formulations in Ayurveda, Unani and Siddha [2]. Ashwagandha is one of the prime drugs of Ayurveda material medica. Acharya Charaka included it in Balya and Brimhana-gana [3]. It is attributed with Balya, Vrishya and Rasayana properties and suggested as substitute of Kakoli and Kshirakakoli. The species name somnifera means 'sleep- inducing' in Latin, indicating that to it are attributed sedating properties, but it has been also used for sexual vitality and as an adaptogen. Some herbalists refer to Ashwagandha as Indian ginseng, since it is used in Ayurvedic medicine in a way similar to that ginseng is used in traditional Chinese medicine. Ethno-medicinally, decoction of the roots is used for colds and chills; and to increase the tone of uterus after miscarriage or birth. An infusion of the root bark has been used for asthma, a use also common to traditional herbal practices in India. In Ayurvedic medicine, its root is used as an anti-inflammatory drug for swellings, tumours, scrofula and rheumatism; and as a sedative and hypnotic in anxiety neurosis. Leaf possesses anti-inflammatory, hepatoprotective, antibacterial properties. Fruits and seeds are diuretic. The berries are used as a substitute for rennet, to coagulate milk in cheese making. Studies have proven that the activity of the Withania extract was approximately equal to the activity of the Panax ginseng extract. Withania somnifera, however, has an advantage over Panax ginseng in that it does not appear to result in ginseng- abuse syndrome, a condition characterized by high blood pressure, water retention, muscle tension, and insomnia [4]. Large numbers of experimental and clinical study conducted on Ashwagandha to screen its safety and efficacy on various biological systems but its data are scattered. Many review papers are also drafted but most of it is focused only on pharmcognostic and pharmacological (in vivo or in vitro) profiles. Keep this in view, attempt has been made to review Ashwagandha with Ayurvedic, experimental and clinical aspects. Ayurvedic classical texts, compendia, lexicons, databases, texts and research journals on medicinal plants were reviewed critically and data acquired were presented in concise form.

INDICATION DESCRIBED IN AYURVEDIC MEDICINE

In Ayurvedic classics, Ashwagandha is indicated for Murchha (syncope), Apasmara (epilepsy), Shosha(cachexia), Unmada (mania/psychosis), Karshya (emaciation), Arsha (piles), Pramehapidika (diabetic carbuncle), Arbuda (tumour), Gandamala (cervical lymphadenitis), Bhagandara (fistula-in-ano), Guhya-vrana (ulcer in genitalia), Vatarakta (gout), Kushtha (diseases of skin), Kilasa (vitiligo), Asthibhanga (bone fracture), Katigraha (stiffness in lumbo-sacral region), Gridhrasi (sciatica), Hanugraha (lockjaw), Janustabdhata (stiffness of the knee), Hrudgraha (cardiac failure), Yonidosha (disorders of female genital tract) and Vidradhi (abscess) [5, 6].

DRUG INTERACTIONS

W. somnifera given in combination with a diazepam produces an additive effect. The combination when used in status epilepticus was able to reduce significantly the effective dose of diazepam to offer complete protection with no subsequent mortality. Administration of W. somnifera markedly alters the plasma levels and pharmacokinetics of Amikacin resulting in the modification of the dosage regimen of Amikacin in healthy buffalo calves which clearly indicated their safe and effective therapeutic use with promising antimicrobial polypharmacy. [5] Immunopotentiation on oral feeding of standardized aqueous extract of Withania somnifera (Linn. Dunal, Family Solanaceae) was evaluated in

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A PHYTOPHARMACOLOGICAL VIEW OF GILOE
Tinospora cordifolia

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ABSTRACT

Tinospora cordifolia (Thunb.) Miers, (Guduchi) is an evergreen perennial climber. This deciduous and dioecious plant belongs to the family Menispermaceae. It is a plant of significant medicinal importance in the Indian system and designated as Rasayana. Its efficacy has been also recognized by the modern system of medicine. The whole plant is used medicinally however; the stem is approved for use in medicine. This is due to higher alkaloid content in the stems than in the leaves. This plant has been known to possess immunomodulatory, hypoglycaemic, antioxidant, anti-hyperglycaemic, antiallergic, anti-inflammatory, diabetes mellitus, hypogycemia and several other properties also. The plant mainly contains alkaloids, glycosides, steroids, diterpenoid lactones, sesquiterpenoid, aliphatic compound and other miscellaneous compound. Plants have been one of the important sources of medicines since the beginning of human civilization. There is a growing demand for plant based medicines, health products, pharmaceuticals, food supplements, cosmetics etc. A review of chemical constituents present in various parts of *Tinospora cordifolia* and their pharmacological actions as given in the present article. *Tinospora cordifolia*, is a commonly used shrub in Ayurvedic medicine. Although the review articles on this plant are already published, this review article is presented to comply all the updated information on its phytochemical and pharmacological activities, which were performed by widely different methods. The notable medicinal properties are anti-diabetic, anti-spasmodic, anti-malarial, anti-inflammatory, anti-arthritic, anti-oxidant, anti-allergic, anti-stress, anti-leprotic, hepatoprotective, immunmodulatory & anti-neoplastic activities.

Key words: *Tinospora cordifolia*, Ayurvedic medicine, immunmodulatory, anti-allergic, health products.

INTRODUCTION

Tinospora cordifolia (Thunb.) Miers, (Guduchi) is one of the important dioecious plants. In Hindi, the plant is commonly known as Giloe, which is a Hindu mythological term that refers to the heavenly elixir that has saved celestial beings from old age and kept them eternally young. Herbal medicines represents one of the most important fields of traditional medicine all over the world. To promote the use of herbal medicine & to determine their potential as a source for new drugs, it is essential to study medicinal plants which have folklore reputation in a more intensified way [1]. Human beings have used plants for medicinal purposes for centuries. Traditional forms of medicine have existed and still exist in many countries of the world including countries in the Indian sub-continent like India, Pakistan and Bangladesh [2]. The writings indicate that therapeutic use of plants is as old as 4000–5000 B.C. and Chinese were the first to use the natural herbal preparations as medicines [3]. Plants are one of the most important sources of medicines.

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AYURVEDIC DRUG SHATAVARI (*Asparagus racemosus*): OVERVIEW

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ABSTRACT

Shatavari, Asparagus racemosus is one of the most important herbal drug used by Ayurvedic Vaidyas since ancient days. The drug is having wide range of therapeutic activity and mentioned as a Rasayan by ancient Ayurvedic texts. The main part used by Ayurvedic doctors is a root. It is mentioned as a tonic and having galactogenic function. Shatavari has also been successfully used by several Ayurvedic practitioners for Nervine disorders, Acid peptic diseases, certain infectious diseases and as a immunomodulant. Main use of this drug is in female disorders specially as a galactagogue and several menstrual disorders. Scientific fraternity is working on this drug at multidimensional level to prove this drug as a potent medicinal drug in multiple disorders. Various scientific studies are proved that this drug worked as a potent antitussive, antineoplastic, galactologue, antidiarrheal, and as immunomodulant. The main focus of this article is to review the scientific studies done on A.racemsosus mainly on its phytochemistry, pharmacology, therapeutic uses mentioned in both modern sciences as well as in ancient Ayurvedic texts. Additional attempt is made to find the clinical studies done on A.racemosus. The present review article includes the detailed scientific exploration of root extract of A.racemosus in systematic way so that it can highlight future research prospects of this famous and commercially useful drug.

KEYWORDS: Shatavari, Asparagus racemosus, Rasayan, Galactagogue.

INTRODUCTION

Ayurveda is gaining popularity worldwide. It has a very rich tradition of herbal medicines. The Ayurveda is totally natural remedy and its major base is herbal medicines. Now days Ayurveda started to become a mainstream healthcare system. Modern medicine is giving relief to the patients but at the cost of heavy side effects. So people are attracted towards Ayurvedic drugs specially herbs and herbal preparations from Ayurveda system. In last decade over the counter sale of herbal medicines has drastically increased. There are several popular herbal drugs are mentioned in Ayurvedic texts and their demand is increased both among Ayurvedic doctors as well as in common man. Shatavari A. racemosus is one of the most popular drug from Ayurveda stream. It is first described botanically in 1799.[1] The genus Asparagus consisted of about 300 species around the world, out of which 22 species are recorded in India. A. racemosus is widely distributed across the globe and its distribution ranges from tropical Africa, Java, Australia, Sri Lanka, Southern parts of China and India, but it is mainly cultivated in India.[2]

Shatavari is main Rasayan drug mentioned by Ayurvedic texts. It is also called as Queen of herb in folklore medicine. The drug is having wide range of therapeutic activity. The plant is easily available all over the India. It is considered as a rejuvenative for female like Withania somniphera for male. The drug is useful in several female reproductive system disorders. A.racemosus prevents aging, antitumor, useful in nervine disorders, and act as anti inflammatory agent. Ancient Ayurvedic texts claimed special use of this drug as a galactagogue and in abortion cases. Charaka mentioned use of root of A.racemosus as an aphrodisiac, in Somaroga as a uterine tonic as well as used in hepatopathy.[3] Several Ayurvedic preparations of A.racemosus is readily available in the market. A.racemosus is one of the cost effective herbal drug. The major advantage of this drug is that it can be used both as a single drug as well as in polyherbal combination.

PLANT DESCRIPTION

A.racemosus is readily available throughout India specially Himalaya region and Sri Lanka. The plant grows high up to 3 to 4 meters tall. The leaves are like pine needles, small and uniform and flowers are white and have small spikes. The plant belongs to genus Asparagus.

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CORONA VIRUS : A REVIEW OF COVID-19

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ABSTRACT
Corona virus causes respiratory infection including pneumonia, cold, sneezing and coughing while in animal it causes diarrhea and upper respiratory diseases. Corona virus transmitted human to human or human to animal via airborne droplets. Corona virus enters in human cell through membrane ACE-2 exopeptidase receptor. WHO and ECDC advised to avoid public place and close contact to infected persons and pet animals. Firstly Corona virus (2019-nCoV) was isolated from Wuhan market China at 7 Jan. 2020.
Keywords : *Corona virus, COVID-19, MERS-CoV, SARS-CoV, Wuhan.*

INTRODUCTION
First case of corona virus was notified as cold in 1960. Ac- cording to the Canadian study 2001, approximately 500 patients were identified as Flu-like system. 17-18 cases of them were confirmed as infected with corona virus strain by polymerase chain reaction. Corona was treated as simple non fatal virus till 2002. In 2003, various reports published with the proofs of spreading the corona to many countries such as United States America, Hong Kong, Singapore, Thailand, Vietnam and in Taiwan. Several case of severe acute respiratory syndrome caused by corona and their mortally more than 1000 patient was reported in 2003. This was the black year for microbiologist. When microbiologist was started focus to understand these problems. After a deep exercise they conclude and understand the pathogenesis of disease and discovered as corona virus. But till total 8096 patient was confirmed as infected with corona virus. So in 2004, World health organization and centers for disease control and prevention declared as "state emergency". Another study report of Hong Kong was confirmed 50 patient of severe acute respiratory syndrome while 30 of them were confirmed as corona virus infected. In 2012, Saudi Arabian reports were presented several infected patient and deaths [1–4]. COVID-19 was first identified and isolated from pneumonia patent belongs to Wuhan, china [5–6].

SPREADING HISTORY OF 2019-nCoV
On 31 Dec. 2019, China, East Asia, most populated coun- try in world was informed to WHO regarding pneumonia cases with unknown etiology. Till 3 Jan. 2020 a total of 44 pneumonia cases were detected. On 7 Jan2020, Chinese research authorities were announced that they were isolated new virus from sea food market in Wuhan city; Named as 2019-nCoV. On 13 Jan. 2020 Ministry of public health Thailand were reported 01 patient imported from Wuhan, China. On 15 Jan. 2020, the ministry of health, labor and welfare Japan were reported first case imported from Wuhan China. On 20 Jan. 2020, National IHR Focal point from the Korea was reported first case 2019-nCoV in Korea. On 23 Jan. 2020, United State of America were confirmed first case of 2019-nCoV in America. On 24 Jan. 2020, Vietnam has reported First case of 2019-nCoV with not travel

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CERTIFICATE

OF ACHIEVEMENT

This is to certify that

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Study on design of Maheshwari textile

Dr. Reena Bhairam

Abstract
Besides biological need like food, water and sex. There are also some social needs of man. He wants respect from the society. He wants to lead happy & prosperous life. There are many methods and sources for the fulfillment of these needs. Education gives him knowledge of the suitability of particular method for the satisfaction of these needs. From the point of view of learning, the formation of good habits is very useful. In the absence of habit the child runs away for the school but after the formation of habit. Going to school becomes interesting to him. "Poor habits of study not only retard school progress but develops frustration, destroy initiative a confidence and make prominent the feeling of worthlessness towards herself and the subject of study whereas effective methods ensure success, happiness & sense of accomplishment" Smith Sammual & Little Field (1948) The present study aims to establish relationship in study habits and attitudes with class room performance. In India the problem is all the more acute with the girls, where because do not get exposed to world of work, As such, their choices of occupation are generally not found congruent with their study habit & attitude The above facts led the researches to think and select, a problem related to study habits and attitudes among urban / and rural adolescent girls.

Keywords: Maheshwari Textiles, fashion, textile industry, design, customer.

Introduction
Maheshwar (Old Mahishmati) has enormous artistic and cultural heritage. This city has endless history and culture in it. Mahismati was the capital of south part of old Awanti Pradesh which is known as Nimar today. Nimar is the main region for the production of cotton. The cloth industry of Nimar has ancient history. Ahilya Bai Holkar, in the year 1767, made Maheshwar her capital. She constructed various Ghats and temples, along with the expansion of education and encouragement to trade & industry. She invited trained weavers from different regions like Hyderabad, Mandav, Gujarat, etc and provided them all the facilities to settle in Maheshwar. In the past, the simple cotton textiles were manufactured here at Maheshwar. But when the weavers came to Maheshwar, they began to manufacture cotton sarees, Pagdi, Safa etc. Cotton was of 5 yards long which was known as Dandiya and 9 yards long was known as saree. For coloring textiles, natural dyes were used. After that, for thin and delicate designs Resham and Zari were used. The themes and patterns of the temple and Ghats were also included in the borders and pallu designs, which are still famous and are the identity of Maheshwar handloom cloth industry. Handloom industries started flourishing back since 1966. But after 1978 they again sunk to loss. During this time, incentives were given to weavers by Devi Ahilya Bai Holkar, Shrimant Maharaj Shivaji Rao Holkar and Shrimanti Shalini Holkar. They paid keen attention towards handloom Saree Industry. Due to incentive and interest shown by these rulers, Rehwa Society was established. Old traditional designs were created and put on Sarees with proper modification and made in colour peak, pote pallu border, etc. Production of sarees was made as per taste of the society. According to the likings of high standard families, new types of designed sarees were manufactured, which were different from the old Maharastrian design. Shrimati Shalini Devi Holkar arranged exhibition under the umbrella of Rehwa Society at Bombay, Delhi, Kolkata, Hyderabad and Bangalore. Due to this advertisement, the familiarity of these sarees reached at the top. At present the number of weavers is about 1200 in Maheshwar. People from different societies have vividly joined this industry. Other than saree, salwar suit, dupatta, pote, tissue pote, dress materials are also manufactured. Maheshwari saree industry is managed and run by joint efforts of weavers, master weavers, co-operative sectors and government sector.

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TECHNOSCIENCE ARTICLE

Nutritional Potentiality of Developed Ready-to-use Multi-Nutrient Malt Mix

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Study Area: Jabalpur, India
Coordinates: 23°10'N; 79°56'E

Keywords: Functional property, Whey protein, Biochemical properties.

Abstract

The present work aims to develop ready-to-use malted cereal pulse mix which could be utilized as base flour for instant convenient or weaning food. Wheat and green gram was malted, sesame seeds were roasted and Whey protein added to increase nutritional components. The malt mix was developed by mixing all the ingredients in a combination to extract maximum nutrients in a desirable way. Biochemical analysis, physical and functional properties were determined. We found no significant rise in protein, fibre, carbohydrate and mineral except a non-significant decrease in fat content. Bulk density of malted mix flour was significantly less (0.75±0.1g/ml) than unprocessed cereal pulse mix (0.82±0.2g/ml) which would be beneficial for growing children and diseased persons where low bulk density is desirable with more capacity to absorb water. Free radical scavenging activity (79%) was increased upon malting however; total polyphenolic content was decreased by 7.3%. It could be concluded that malting and roasting enhances nutritional components and functional properties of the ready-to-use multi-nutrient malt mix developed for a low economical section to meet their nutritional demands.

Introduction:

Nutritional deficiency is a widespread problem among the Indian population affecting mostly the children, expecting women and elderly people from the weaker sections of the society. Interest to eat right and food with functional property has increased among consumers. The development of cost-effective nutrient-dense ready-to-use value-added products has long been advocated. Cereal and pulses are stapled food as the most important energy and protein source constituting 60-70% of the total food intake (Baranwal, 2017). To improve the nutritional potential of cereal and pulses, household techniques such as roasting, germination, fermentation, and malting are some of the excellent alternatives. Malting induces beneficial biochemical modification in plant seeds thereby enhancing the bioavailability of the nutrients and anti-oxidative capacity of the food. Malting increases protein content dietary fiber and reduces of bulk density and palatability of food, making it suitable for the children and heavy workers of various occupations. Wheat represents the most important cereals in human nutrition with the largest consumption. It contributes a good proportion of nutrients in our daily diet (Hidalgo *et al.*, 2016), whereas pulses like green gram contain 25% protein, high dietary fiber, and micronutrients. Pulses compliment cereals for limiting amino acid (lysine). Whey protein concentrate possesses a high amount of amino acids and biologically active component which supplements the diet in a beneficial way. Sesame has a superior quality of fat, high tocopherol, and lignin contributing anti-oxidant and cholesterol-lowering effects (Luo & Xie, 2017). The food or diet with substantial anti-oxidative capacity is much required for workers engaged in mining and other occupations with the risk of high oxidative stress. By keeping the same in mind, the present works aim to develop ready-to-use malted cereal pulse mix which could be utilized as base flour for weaning food or instant convenient food for all age groups especially belonging to the weaker section of our society.

Methodology:

Collection of Raw Ingredient: wheat (variety MP-3336) was collected from our institutional research farm, Jabalpur, M.P., India. Green gram was made available from National Research for Weed Science, ICAR , Jabalpur,

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मध्यभारतीय कोइतूरों की जात मिलौनी प्रथा: एक नारियल सदृश संकल्पना

सारांश

प्रायः विवाह के सन्दर्भ में समाजों में अंतर्विवाह की परम्पराएं प्रचलन में देखी जाती हैं, समाज अपने ही जातिध्समूह के अन्दर विवाह करने को अधिक महत्त्व देते हैं और समूह के बाहर विवाह करने पर सामाजिक मान्यता नहीं मिलती एवं कठोर दंड के प्रावधान भी होते हैं । किसी भी विवाह की सामाजिक स्वीकार्यता या मान्यता उसकी वैधता का प्रमाण होती है और जात मिलौनी नामक प्रथा सामाजिक रूप से अवैध विवाह को भी वैधानिकता प्रदान करने का प्रकार्य करती हैय अतिकठोर एवं दंडात्मक व्यवस्थाओं से इतर यह प्रथा समुदाय के बाहर विवाह करने पर भी अंततः व्यक्ति को समाज में प्रवेश करने का अवसर प्रदान करती है। "जात मिलौनी", मध्य भारत की कोइतूर कही जाने वाली, गोंड तथा बैगा जनजातियों में प्रचलित है जिसका अर्थ 'जाति को मिला लिया जाना' हैय अपने नाम से ही यह सकारात्मक अर्थ प्रस्तुत करती है ।

मुख्य शब्दरू कोइतूर, जात मिलौनी, तुलनात्मक अध्ययन

प्रस्तावना

प्रारम्भिक स्वरूप में विवाह दो व्यक्तियों को सह–जीवन आरंभ करने हेतु स्वीकृति प्रदान करने वाली एक संस्था के रूप में था, किन्तु कालान्तर में वर्ग–विभेद के फलस्वरूप इसके प्रकार्यों में परिवर्तन होना शुरू हो गया । चूंकि विवाह समाज में बाहरी तथा भीतरी व्यक्तियों को प्रवेश देने में एक अहम भूमिका निभाता है, इसीलिए किसी भी संस्कृति में बाहरी तथा भीतरी व्यक्ति के अर्थ को स्पष्ट करने के लिए अलग अलग मानक होते हैं। इसी आधार पर समाज में हम अंतर्विवाही तथा बहिर्विवाही विवाही समूहों को देखते हैं। अंतर्विवाही, वह जो अपने समुदाय के भीतर ही विवाह करते हैं तथा बहिर्विवाही वह जिनमें समुदाय के बाहर विवाह करने की स्वतंत्रता होती है। भारत में आम तौर पर विवाह जाति आधारित अर्थात अंतर्जातीय होते हैं, इसका तात्पर्य यह है कि समुदाय प्रायः अपने ही समूह के भीतर विवाह करने की अनुमति देते हैं तथा समुदाय से बाहर विवाह करने पर कठोर दंड अथवा समाज से बाहर कर दिया जाता है । ग्रामीण भारत के समाजों में हम जाति व्यवस्था को समाज के एक अनिवार्य अंग के रूप में देखते हैं, जहाँ मुख्यतः विवाह के सम्बन्ध में जाति एक महत्वपूर्ण

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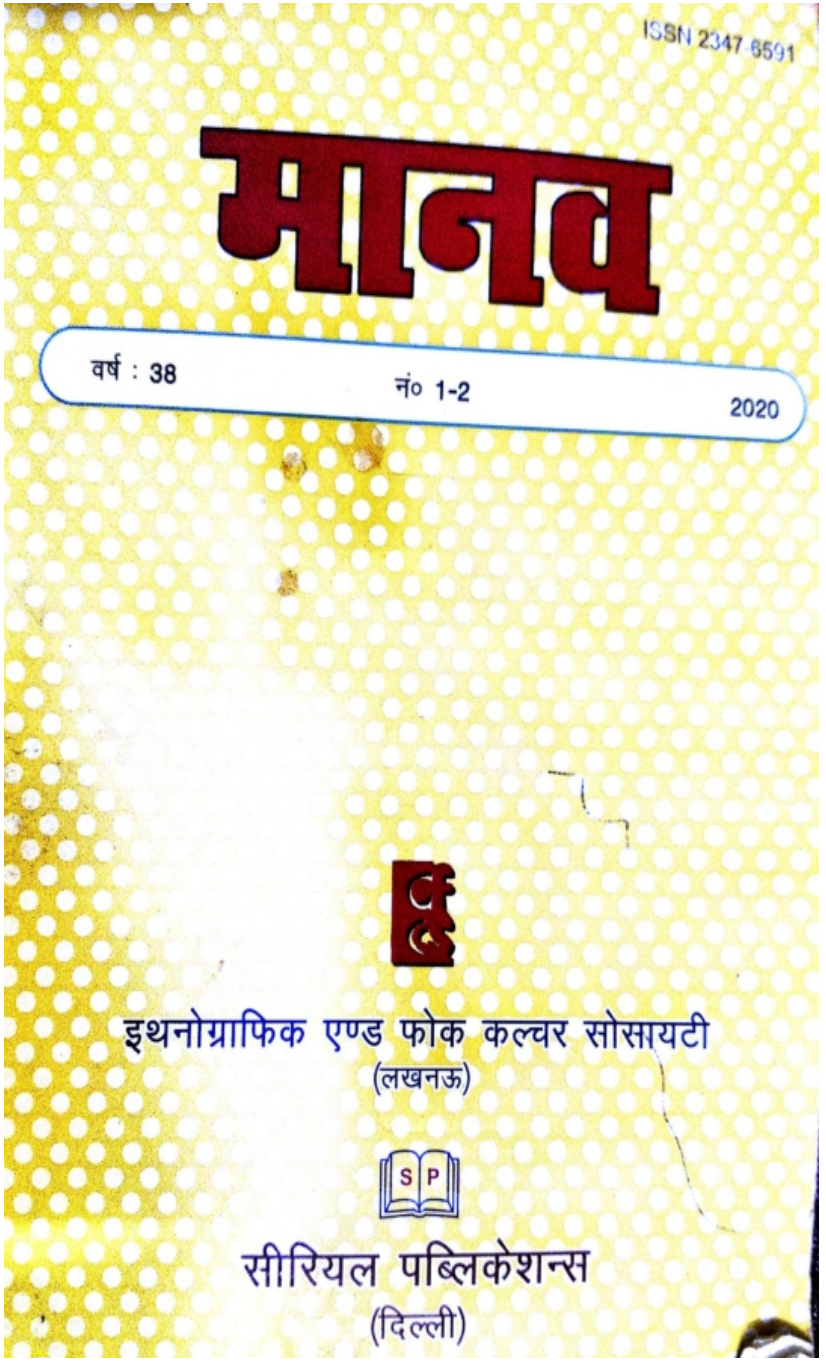

ORIGINAL RESEARCH PAPER

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COMPARATIVE ACCOUNT OF SECONDARY METABOLITES AND ANTIOXIDANT ACTIVITIES OF TWO VARIETIES OF GUAVA FRUIT *(PSIDIUM GUAJAVA* LINN) SOLD IN CENTRAL INDIA

Biological Science

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ABSTRACT

The present work was taken up to compare the phytochemical and antioxidant properties of two guava cultivars being sold in the local markets of Central India, the local cultivar and the Thai cultivar, which is produced by grafting method. The results showed that the Thai cultivar has lower amounts of phenolic compounds, i.e. flavonoids, anthocyanins, tannins and triterpenes as compared to the local fruit cultivar. Further, the amount of antioxidant activity against reactive oxygen species and DPPH was also lowered in Thai cultivar, stating that this grafted varieties has less potential to scavenge free radicals and combating diseases.

KEYWORDS

Psidium guajava, Thai guava, Phytochemicals, Free radicals, Antioxidants

INTRODUCTION

It is now a well established fact that antioxidants are able to reduce the risk of cardiovascular diseases, strokes as well as cancer in human body[2]. Fruits are the natural sources of antioxidants and are widely used and recommended worldwide. Local and seasonal fruits are often preferred[3].

Guava (*Psidium guajava* Linn.) is native to tropical countries, including India, where it is grown as garden tree in most of the parts of India, including Central India. The guava fruit is eaten as a fruit or used in culiniary purposes such as drinks, smoothies and desserts. Guava fruits are known for various medicinal properties, including antioxidant activity primarily[4]. Guava is a winter fruit available in abundance in Central India, and the local cultivars are usually inexpensive and easily available. The Central Indian market is now flooded with a Thai cultivar for the last few years. This Thai guava is prepred by the grafting technique. These guava cultivars are larger in size and weight, have soft flesh and less seeds, with better taste than the local cultivar, which has smaller size, hard flesh with abundance of seeds.

There are scientific evidences that different cultivars and varieties of guava have variations in their phytochemical profile as well as their potency to scavnege reactive oxygen species and free radicals[5]. Since, fruits are prime sources of antioxidants, the present study investigated the two cultivars for their phytochemical profile as well as their comparative antioxidant activities against reactive oxygen species and free radicals.

MATERIALS AND METHODS

Collection of fruits

The Thai cultivars of guava were purchased from a local marketplace. The local cultivar of Central India was obtained from a kitchen garden of local area. The fresh fruits were taken to the laboratory, washed thououghly with running tap water, cut into small pieaces are shade dried for a week or longer to achieve constant weights. The dried fruits are milled, sieved through 100 no. seive and the powder obtained was stored in airtight containers till use.

Extraction of phytochemicals

The phytochemicals from dried fruit powder (10 g) were extracted sequentially with solvents of varying polarity, starting from polar (aqueous) to non polar solvents (methanol, ethyl acetate and petroleum ether). Aprt from aqueous extraction, which was done using cold percolation method, other extractions were performed using a Soxhlet extractor[6]. The extracts were concentrated *in vacuuo* upto 10 ml (1 g ml^{-1} concentration).

Phytochemical screening

The secondary metabolites from two cultivars of guava were qualitatively screened as per the methods given by Harborne[6], in all four solvent extracts separately.

Determination of antioxidant activities

The antixodiant activities of two guava cultivars were assessed by the potential to scavenge reactive oxygen species as well as artificial free radicals. For sample preparation, all four solvent extract were dried under vacuum, and redissolved in ethaol to get 4 mg ml^{-1} concentration as per dry weight. Ascorbic acid in same concentration was used as a positive control, while ethanol served as negative control. The antioxidant activity (%) was calculated as below:

% antioxidant activity = (A-Ax)/Ax 100

Where

A- Absorbance of reaction mixture with ethanol (blank).

Ax- Absorbance of reaction mixture with test solution

a. Hydrogen peroxide radical scavenging activity

Scavenging of hydrogen peroxide (H_2O_2) by the extracts was estimated as per the protocol described by Bozin *et al.*[7]. For this, 0.6 ml of 40 mM H_2O_2 in phosphate buffer (pH 7.4) solution was added to the test tubes containing 3.4 ml of the guava extracts. After thoroughly mixing the reaction mixture, absorbance was noted on spectrophotometer (EI, India) at 230 nm.

b. Superoxide radical scavenging activity

The superoxide radical scavenging activity was determined as described by Noda et al.[8]. The antioxidant activity of guava extracts is monitored as reduction of nitroblue tetrazolium chloride (NBT) by superoxide radicals. Superoxide radicals were generated by the phenazine methosulfate (PMS)/ β -nicotinamide adenine dinucleotide (NADH) system. The reaction mixtures in the sample wells consisted of NADH (166 µM), NBT (43 µM), guava extract (100 µl) in a final volume of 300 µl. The reaction was started by adding and PMS (2.7 µM, 100 µl), continued for 2 minutes and the decrease in absorbance of the reaction mixture was recorded at 560 nm using a spectrophotometer.

c. Nitric oxide scavenging activity

Nitric oxide radical scavenging was determined as per the Hazra et al.[9]. The reaction mixture contained 10 mM sodium nitroprusside, phosphate buffered saline (pH 7.4) and 1 ml of guava extract in a final volume of 3 ml. The reaction mixture is incubated at room temperature for 2.5 h, before adding of 1 ml sulfanilamide (0.33% in 20% glacial acetic acid) to 0.5 ml of the incubated reaction mixture. The reaction mixture is allowed to stand for 5 min again before addition of 1 ml of napthylethylenediamine dihydrochloride (NED) (0.1% w/v). The mixture is again incubated for 30 min at RT. The absorbance of the reaction mixture was measured spectrophotometrically at 540 nm against a blank sample.

d. DPPH (2,2-diphenyl-1-picrylhydrazyl) radical scavenging activity

The free radical scavenging activity of guava extracts against a synthetic free radical; 2,2, diphenyl-1-picrylhydrazyl (DPPH) was measured as the modified method of Kumar et al.[10]. The reaction mixture consisted 500 µl of guava extract with 500 µl DPPH solution (60 µM DPPH in ethanol) and incubated for 60 min at RT in dark. The absorbance was then measured at 517 nm using a spectrophotometer against blank.

e. Ferric ion reducing antixodant power assay (FRAP)

The FRAP assay was performed as per the procedure given by Aparadh

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पूर्व–शालेय बच्चों की बाल–संगोपन गतिविधियों में पिता की सन्निहिति पर परिवार की प्रकृति के प्रभाव का अध्ययन करना

सिद्धि पाण्डे[1]
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सारांश–

प्रस्तुत शोधकार्य का उद्देश्य बालक, बालिका एवं इनके सम्मिलित समूह की बाल–संगोपन गतिविधियों में पिता की सन्निहिति पर परिवार की प्रकृति के प्रभाव का अध्ययन करना था। इस हेतु एकल एवं संयुक्त परिवार के 100–100 बालक एवं बालिकाओं के पिताओं को न्यादर्श में चयनित किया गया। प्रदत्त संग्रह के लिए रीता चौपड़ा की पैरेंटल–इन्वाल्वमेंट इन्वेन्ट्री के साथ–साथ शोधकर्त्ता द्वारा निर्मित पैरेंटल–इन्वाल्वमेंट इन्वेन्ट्री का उपयोग किया गया। न्यादर्श में चयनित बालक एवं बालिकाओं के पिताओं पर प्रश्नावली का व्यक्तिगत रूप से प्रशासन किया गया। विश्लेषण के उपरांत जो निष्कर्ष निकले उनसे ज्ञात होता है कि संयुक्त परिवार के बालकों के बाल–संगोपन में पिता की सन्निहिति अधिक है जबकि एकल परिवार की बालिकाओं के बाल–संगोपन में पिता की सन्निहिति अधिक है। संयुक्त एवं एकाकी परिवार के बालक एवं बालिकाओं के सम्मिलित समूह के बाल–संगोपन में पिता की सन्निहिति में अंतर होता है। अतः यह कहा जा सकता है कि बालक एवं बालिकाओं के बाल–संगोपन में पिता की सन्निहिति में परिवार की प्रकृति का सार्थक प्रभाव पड़ता है।

वर्तमान परिदृश्य में समाज में सामाजिक संबंधों में महत्वपूर्ण परिवर्तन हुए हैं। इसमें सबसे महत्वपूर्ण संबंध माता–पिता एवं बच्चे के बीच में होता है। जैसे ही परिवार में बालक का जन्म होता है, यह माता–पिता के लिए एक अद्भुत अनुभव होता है। माता–पिता अपने बच्चे के लालन–पालन में हर संभव प्रयास करते हैं, जिससे उनका शारीरिक एवं मानसिक विकास अधिकतम संभाव्य सीमा में हो सके। बालक के जन्म के पश्चात् परिवार की दिनचर्या बच्चे को ध्यान में रखकर चलती है। पारम्परिक रूप से देखा जाए तो परिवार में शिशु के लिए माता की अहम् भूमिका होती थी और पिता की परिवार को एक कठोर नियमों में बाँधकर रखने वाले की, लेकिन वर्तमान में पिता की इस अभिवृत्ति में उल्लेखनीय परिवर्तन हुए हैं और उनकी बालकों के लालन–पालन में जो सन्निहिति बढ़ी है इसके पीछे परिस्थितियाँ भी उत्तरदायी हैं। शिक्षा के स्तर में वृद्धि के परिणामस्वरूप जागरूकता आने के कारण मनोवृत्ति में परिवर्तन हुए हैं, जैसे–परिवार की आर्थिक स्थिति को ऊँचा उठाने हेतु माता का घर से बाहर कार्य करना एवं पति का पत्नि के कार्य में सहयोग करना जिससे कि परिवार की स्थिति सुदृढ़ हो सके। बाल–संगोपन पद्धति से तात्पर्य माता–पिता का अपने बच्चों के प्रति भोजन, वस्त्र, शयन, मलमूत्र प्रशिक्षण तक ही सीमित नहीं है, वरन् अनुशासन का प्रशिक्षण, प्रेम और लगाव का भी, अपनी धैर्यपूर्ण अभिव्यक्ति द्वारा सिखाना एवं सुरक्षा की आवश्यकता को भी परिपूर्ण करना है। बाल–संगोपन में पिता की सन्निहिति प्रारंभ में मनोरंजन के लिए होती है और पिता के लिए अनुभव बड़ा ही चुनौतीपूर्ण होता है। जिस परिदृश्य में वे अपने शिशु को अंतःक्रियाओं के माध्यम से उत्साहित करते हैं कि वे अपनी शक्ति एवं योग्यता को पहचाने। पूर्व में बच्चों के लालन–पालन में वरिष्ठ महिला सदस्यों द्वारा कठोर नियम बना दिये जाते थे, जिसका बच्चों की माताओं को पालन करना अनिवार्य था, भले ही वह उतना उपयुक्त न लगता हो। उस समय बच्चों को दूध पिलाना, सुलाना, शौच–प्रशिक्षण, आदि का समय लगभग निश्चित रहता था एवं इसमें परिवर्तन बहुत कम होता था। महिलाओं की शिक्षा एवं मीडिया के प्रभाव के फलस्वरूप अब स्थिति इससे भिन्न है। उस समय बच्चों को प्यार, सुरक्षा एवं स्नेह पर अधिक बल दिया जाता था। वर्तमान में संयुक्त परिवार का स्थान एकल परिवार ने ले लिया है, वहाँ मुख्य रूप से पति–पत्नि हैं, जो बच्चों का लालन–पालन करते हैं। जहाँ विवाहित महिला कार्यकारी हो ऐसे में पति–पत्नि दोनों को एक दूसरे का साथ बच्चे को बड़ा करने में देना होता है जिसमें पिता की भूमिका भी अहम् हो जाती है। अकेले भारत में ही नहीं परंतु संपूर्ण विश्व में यह अनुभव किया जाने लगा कि बच्चों का लालन–पालन माता–पिता का एक संयुक्त उत्तरदायित्व है जिसमें दोनों की भूमिकाएँ आपस में बदल सकती हैं। मनोवैज्ञानिक दृष्टिकोण से हर व्यक्ति की जीवन यात्रा में उसे आयु के बढ़ने के साथ भूमिकाओं में परिवर्तन करते रहना पड़ता है। परिवार के सभी सदस्यों की विविध भूमिकाएँ होती हैं, जिनके उपयुक्त निर्वाह के बिना परिवार ठीक तरह से नहीं चल सकता एवं छोटे बच्चों के विकास पर प्रभाव पड़ता है। इसमें परिवार के हर सदस्य की भूमिका एक दूसरे से जुड़ी हुई रहती है एवं यह पूरक के रूप में काम करती है। इसके महत्व को कम नहीं किया जा सकता। इसके साथ यह बात स्पष्ट रूप से दिखाई पड़ती है कि परिवार में पुरुषों की भूमिका में जब बदलाव होता है तो उस समय महिलाओं की भूमिका भी निरंतर परिवर्तित होती रहती है। ऐसी स्थिति में एकल एवं संयुक्त परिवार तथा महिला का कामकाजी या गृहणी होना महत्वपूर्ण हो जाता है जिसके कारण बच्चों का लालन–पालन प्रभावित होता है। एकल एवं संयुक्त परिवारों के संदर्भ में परिवारों की भूमिका भिन्न हो जाती है, क्योंकि इन परिवारों की प्रकृति के कारण प्रत्येक सदस्य की भूमिका भिन्न हो जाती है। यह भी महत्वपूर्ण है कि विकासात्मक दृष्टिकोण से पिता एवं बच्चे की भूमिका विकास के विभिन्न परिप्रेक्ष्य में देखी जा सकती है, इनमें संज्ञानात्मक, सामाजिक, संवेगात्मक क्षमताएँ भिन्न हो जाती हैं एवं इनके दृष्टिकोण से भी इसे देखा जाना चाहिए। बच्चे का

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BONE MINERAL DENSITY IN KATNI ADOLESCENTS: RELATION TO THEIR NUTRIENT INTAKE AND PHYSICAL ACTIVITY

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Abstract
Katni is the small district of Madhya Pradesh and the present study of Bone Mineral Density was conducted on the adolescent population of this region. The objective of the study was to determine the bone health of the adolescent population and to create awareness regarding the nutrition intake and physical fitness to maintain the optimum BMD. The subjects under study were mainly girls who are very conscious about their body weight and to remain lean and thin stick to low food intake. They are also very sensitive regarding skin colour and hence keep themselves covered to avoid exposure to the sun, which may cause tanning. These practices lower the bone mineral density to critical levels which may lead to several health-related complications at a later age. In the present study, efforts were made to educate the adolescent population regarding the importance of proper diet and physical activity to maintain normal BMD. The present study reviewed the work of few authors in the field of nutrition and food science and the databases searched were PubMed, CINAHL, Science Direct, Cochrane library, SpringerLink and Wiley online Library. The indigenous work of the author was to test the null hypothesis that there is no role of physical activity and nutritional intake in affecting bone mineral density.

Keywords: Bone health, BMD, Physical activity, Nutrition, adolescents

Introduction

The maintenance of adequate bone health in adolescent requires proper nutrition with appropriate calcium and vitamin D intake and it is also recommended that they participate in regular physical activity.[1] In the population under study, these dual goals were not being achieved by most adolescents. To understand the importance of physical activity and nutrition in relation to bone health in teenagers, routine health care assessments should be carried out. The nutritional status of the adolescents is very important as it decides the future health and wellbeing of an individual. Therefore, the routine adolescent health care requires to determine the calcium intake of the individual and also to screen the family for the history of osteoporosis.

While acquiring the adult structure, the framework of an individual undergoes extensive changes and the skeleton modifies and attains a peak bone mass.[2] The bone mass is mainly determined by the physical activity specially which involves the weight-bearing activity. Multiple studies on the active group of children involved in sports and athletics like tennis players and gymnasts have demonstrated an association between physical activity and a BMD. [3-7] Besides physical activity, adequate nutrition also helps in maintaining bone growth and mineralization. The deposition of minerals helps in increasing the bone mass and BMD can be increased to 20% with proper diet and exercise.[8] The growth and development of the skeleton occurs at the maximum rate during childhood and adolescence and at this stage of life much bone is formed rather lost while in the later stages of life the reverse happens and more bone tissue is lost than formed and that is why the optimum nutrition and physical activity during this stage of life helpsin maintaining the proper bone health. The mass of the bone is formed through the coordinated functions of two kinds of cells known as osteoblasts and osteoclasts. The mesenchymal cells that differentiate in muscles, fibrous tissues, adipocytes and cartilage form the osteoblasts or bone cells. The other types of cells that are

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NUTRITIONAL & MEDICINAL BENEFITS OF MUSHROOM : A MINI REVIEW

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Abstract :
This paper reviews mushrooms. In this paper, nutritional and medicinal values, other uses of mushrooms were discussed. Mushrooms have been important in human history as food, as medicine, as legands, and in folk lore and religion. Mushrooms are basically consumed for their texture and flavor. They have recently become attractive as health - beneficent food and as sources for the development of drugs. Many higher mushrooms are known to contain a number of biologically active components that show promising antitumor and immunomodulating, cardiovascular, hepatoprotective, hypocholesterolemic, antiviral, antibacterial, antiparasitic and antidiabetic effects. Nutritional value of mushrooms lies between that of meat and vegetables. The rich source of proteins, vitamins and minerals and low in fat content (2-8%) unique chemicals constitution of mushrooms makes them low calorie food 8 and choice diet for those suffering from hypertension, arthrosclerosis, diabetes, obesity. Mushrooms play a role in the development of new biological remediation techniques and filtration technologies (e.g. using fungi to lower bacterial levels in contaminated water). From the review it was observed that developing countries should harness the potentials of mushrooms as this would boost the revenue income and healthy living. It is hoped that this paper would add to existing information on this fungus.
Keywords : *Mushrooms, Medicinal value, Nutritional value.*

INTRODUCTION

Mushrooms are macro fungi with distinctive fruiting bodies which are either epigenous or hypogenous and sufficiently conspicuous to the naked eye to be hand-picked. Mushrooms are lively in folklore as ,witches egg and fairy egg. The appraisal of mushrooms as highly nutritive foodstuff is well founded. Many kinds of mushrooms are edible, and at the same time possess tonic and medical attributes. Human use of mushrooms extent as early to 5000 BC. About 2000 species of edible mushrooms are known all over the world. For centuries, some mushrooms have been used in religious ceremonies of many ancient people and primitive tribes. Mushrooms are believed by the Romans to have properties that could produce super human strength, help in finding lost objects and lead the so ul to the realm of the gods (Grube et al., 2001). Edible mushrooms are important sources of food. They form very nourishing meals especially for invalids, for they are easily digestible. They are consumed not only for their innate flavour and taste, but also for their important nutritional value. On fresh weight basis mushrooms are superior in protein content (Aremu et al., 2009) to all vegetables and fruits, but are inferior to meat and dairy products, which are the conventional protein sources. On dry-weight basis, however, mushrooms are similar with respect to dried- yeast and superior to dried peas and beans.

Most mushroom derived preparation and substances find their use not as pharmaceutical but as a novel class of dietary supplements (DS) or nutraceutical. A mushroom nutraceuticals is a refined or partially refined extract or dried biomass from either the mycelium or the fruiting body of the mushroom, which is consumed in the form of capsule or tablets as a dietary supplement and which may enhance the immune response of

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THE PERCEPTION AND PRACTICE OF WEANING AMONG MOTHERS OF CENTRAL INDIA

Community Medicine

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ABSTRACT

Background - During the growth phase of a child the first two years of life is a critical window period under which a child not receiving adequate food is vulnerable to become under nourished. The under nutrition in children and under five mortality can be prevented by giving breast milk and weaning food as per the recommended guidelines. According to NFHS 4 report 7.7% infants below 2 months of age, 8.1% infants of age 2-3 months and 14.1% infants of age 4-5 months were already given complementary food even before achieving the age of six months. Hence this study was conducted to assess perception and practice of weaning.

Method: A cross – sectional research design was used to assess the perception and practice of weaning among 500 mothers of infants up to 12 months of age. The study was conducted from July 2015 to August 2016 at Department of Pediatrics of NSBC Medical College, Jabalpur. The sample of the study was randomly selected mothers having child age up to 12 months of age who were visiting OPD of Pediatric department.

Results: 465 (93%) of participating mothers were aware about weaning. Majority (40.43%) of mothers got information about weaning from her family members and relatives. A significant association between education status of mothers and awareness about weaning was found. The education status and socioeconomic status of mothers was significantly associated with mother's perception about age of initiating weaning. Mother's perception about age of initiating weaning was significantly associated with mother's family type.

Conclusion: In present study a higher percentage of mothers were aware about weaning. The family members and relatives of mothers seem to play an important role in making a mother aware about weaning practice. Education of mother and joint families seems to play an important role in making a mother aware about proper age of initiating weaning.

KEYWORDS

Weaning, awareness, perception, central India

INTRODUCTION

The condition of malnutrition is defined as a state that results from either deficiency or excess of one or more essential nutrients in diet. It continues to be a public health problem in developing nations like India.[1] According to an estimate almost 90% of all stunted children population lives in developing countries of Africa and Asia.[2] According to WHO report on global burden of disease thirty five percent of under-five deaths worldwide are due to the presence of undernutrition.[3] During the growth phase of a child the first two years of life is a critical window period under which a child not receiving adequate food is vulnerable to become under nourished. The condition of under nutrition in children and under five mortality can be prevented by giving breast milk and weaning food as per the recommended guidelines. WHO has recommended exclusive breast feeding for the first six month of life, with the addition of complementary feeds at the age six months with continued breast feeds until at least the age of two years.[4] WHO has defined complementary feeding period as the period during which other foods or liquids are provided along with breast milk and any nutrient containing foods or liquids given to young children.[5]

It has been observed in many studies that awareness of initiating complementary food, education status of mothers, age of mothers, socio economic status and sex of child are some of the factors which can lead to either too early or too late initiation of weaning.[6,7,8] According to NFHS 4 report 7.7% infants below 2 months of age, 8.1% infants of age 4-5 months were

Inclusion criteria –

The mothers included in the study were of the age between 18 to 35 years. Randomly selected mothers having child age up to 12 months, who were visiting the OPD of Pediatrics department for treatment of their child and were ready to give required information (as per questionnaire) after giving informed consent were included in the study.

Exclusion criteria –

The mothers who were not willing after informed consent, who were more worried for the health condition of their child and were unable to spare time give information and those children who need hospitalization were also excluded from the study. Some of the children who were brought by the relatives of mother or father for treatment were also excluded.

Data was collected in a pretested questionnaire which consisted of sections to include demographic information, knowledge of weaning practices, food items used by mothers in weaning process. The mothers were asked whether she knows about weaning or not. The responses were recorded in the form of YES or NO. Those responded yes were asked about the source from which they came to know about weaning. The mothers were asked to tell about the age of child at which they started weaning or they are going to start the weaning. Socioeconomic classification was done according to Kuppuswamy classification. The collected data was analyzed by SPSS software version 20.

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किशोरों एवं किशोरियों के व्यक्तित्व के विभिन्न आयाम पर अभिभावक प्रोत्साहन के प्रभाव का अध्ययन

श्रीमती आरती कोरी

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प्रोफेसर शासकीय मोहनलाल हरगोविंददास गृहविज्ञान एवं विज्ञान महिला (स्वशासी) महाविद्यालय, जबलपुर (म.प्र.)

प्रस्तुत शोधपत्र किशोरों एवं किशोरियों के व्यक्तित्व आयाम पर अभिभावक प्रोत्साहन के प्रभाव का अध्ययन से संबंधित है। किशोर एवं किशोरियों की व्यक्तित्व आयाम पर अभिभावक प्रोत्साहन के प्रभाव के अध्ययन हेतु डॉ. आर. आर. शर्मा द्वारा निर्मित अभिभावक प्रोत्साहन मापनी एवं डॉ. अरूण कुमार सिंह द्वारा निर्मित सिंह डिफरेन्शियल पर्सनॉल्टी इन्वेन्टरी का उपयोग किया गया। शोध कार्य हेतु सर्वेक्षण विधि का उपयोग किया गया। न्यादर्श हेतु शासकीय एवं अशासकीय विद्यालयों के 400 छात्र एवं छात्राओं का चयन किया एवं परिणामों के विश्लेषण उपरांत निष्कर्ष स्वरूप पाया कि छात्र, छात्राओं एवं विद्यार्थियों के व्यक्तित्व आयाम निर्णात्मकता एवं उत्तरदायित्व पर अभिभावक प्रोत्साहन का कोई प्रभाव नहीं पाया गया है। छात्राओं एवं विद्यार्थियों के व्यक्तित्व आयाम सांवेगिक स्थिरता पर अभिभावका प्रोत्साहन का प्रभाव पाया गया जबकि छात्रों के व्यक्तित्व आयाम सांवेगिक स्थिरता पर कोई प्रभाव नहीं प्राप्त हुआ है।

प्रस्तावनाः–

किशोरावस्था वह अवस्था है, जिसमें बाल्यावस्था के उपरांत के बदलाव दिखाई देते हैं, इस समय को सबसे कठिन काल कहा गया है। इस बदलाव की अवस्था में किशोरों के शारीरिक, मानसिक, संवेगात्मक एवं सामाजिक विकास पर सकारात्मक व नकारात्मक दोनों ही बदलाव दिखाई दे रहे हैं, जो उनके व्यक्तित्व को दर्शाते हैं। व्यक्तित्व वह मुखौटा है, जिसमें किशोर अपने स्वयं के चरित्र को प्रस्तुत करते हैं। यदि इसमें कोई बाधा आती है तो किशोरों में संवेगात्मक अस्थिरता व मनोबल में कमी जैसे व्यक्तित्व कारकों की नकारात्मकता को कम करने के लिए अभिभावक प्रोत्साहन एक सकारात्मक व्यवहार होता है। ऐसे व्यवहार में माता–पिता ही उनके जीवन में मार्गदर्शक का कार्य करते हैं और उन्हें उचित व अनुचित व्यवहार का ज्ञान कराते हैं। माता–पिता द्वारा दिए गये मार्गदर्शन से वे प्रोत्साहित होते हैं और अपने कार्यों को और अच्छी तरह से करते हैं। क्या प्रोत्साहन से उनमें सकारात्मक भावनाएँ प्रबल होती हैं और नये कार्यों को करने के लिए प्रेरित करती हैं। और क्या इससे नकारात्मक स्वभाव से किशोरों को बचाया जा सकता है। इन प्रश्नों के उत्तर जानने के लिए वर्तमान अध्ययन में अभिभावक के प्रोत्साहन का प्रभाव उनके व्यक्तित्व के विभिन्न आयामों में किस प्रकार पड़ता है, इसका अध्ययन किया जा रहा है क्योंकि व्यक्तित्व किसी भी किशोर के जीवन काल का दर्पण होता है। इस पर अभिभावक प्रोत्साहन का कैसा प्रभाव पड़ता है, यह जानना अति आवश्यक है। इन प्रश्नों के उत्तर को जानने के लिए इस अध्ययन की महत्ता बढ़ जाती है।

आधुनिक वर्तमान समय में शिक्षा का विकास होने के साथ ही किशोरों का शैक्षणिक स्तर बदल गया है, जिससे शैक्षणिक बदलाव से उनकी समस्याएँ भी बदल गई हैं। अतः इन समस्याओ के समाधान के लिए अभिभावक प्रोत्साहन ताले की चाबी के समान अपनी भूमिका प्रदर्शित करते हैं। जिससे किशोरों में सकारात्मक व्यक्तित्व आयामों का विकास हो और अभिभावक प्रोत्साहन उचित मार्ग पर जाने के लिए किशोरों को प्रेरित कर सके। इस शोध कार्य से अभिभावक प्रोतसाहन से किशोरों के व्यक्तित्व के विभिन्न आयामों पर पड़ने वाले प्रभाव को जाँचा जा सकता है।

वर्तमान समय में किशोर/किशोरियाँ के जीवन में विभिन्न प्रकार की कठिनाईयाँ आती है इन कठिनाईयों से निकलने के लिए उन्हें उचित मार्गदर्शन की आवश्यकता होती है, जो उन्हें अपने अभिभावक द्वारा दिया जाता है। जिससे वे कठिन परिस्थितियों से लड़ने के लिए सही मार्ग चुन सकते है। अभिभावक प्रोत्साहन उनके कठिनाईयों को दूर कर आत्मनिर्भर बनाने में मदद करता है।

किशोरों का व्यक्तित्व उस गुलाब के फूलों की महक जैसा होता है जो आस–पास के सभी लोगों को प्रभावित करता है। उनके व्यक्तित्व के विभिन्न आयाम मिलकर ही व्यवहार का निर्माण करते है। जिस प्रकार गुलाब के फूलों में महक होती है। उसी प्रकार कांटे भी होते है, अतः कांटों को हटाने के लिए उन्हें तोड़कर फेंका जा सकता है, उसी तरह किशोरों के व्यक्तित्व में सकारात्मक व नकारात्मक दोनों ही पहलू होते है। उनमें नकारात्मक पहलू को हटाने के लिए अभिभावक प्रोत्साहन स्थिर ऊर्जा का काम करता है। जिससे किशोरों में सकारात्मक व्यक्तित्व

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Research Article

EVALUATION OF CATECHU EXTRACTS FROM ACACIA CATECHU COLLECTED FROM CENTRAL INDIA FOR ANTIDIABETIC ACTIVITY

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ABSTRACT

Catechu, obtained from *Acacia catechu* heartwood is one of the important substance having various pharmacological and therapeutic activities. During the present study, the heartwood of *Acacia catechu* was collected from the forests of Jabalpur, Central India and the decoction of heartwood (crude catechu) was partitioned with water, ethanol and ethyl acetate. The aqueous extract was rich in tannins, while flavonoids partitioned with ethanol primarily. The ethanolic extract of catechu showed slower glucose migration (73.9% reduction) across semipermeable membrane, as well as slowered the starch assimilation by inhibiting 67.8% of α-amylase activity, as compared to acarbose (87.2%). Ethyl acetate extract was also effective as antidiabetic agent.

INTRODUCTION

India's ancient legacy describes the uses of local flora for the treatment of various diseases, as well as their uses as therapeutic agents to prevent such illnesses and up keeping of good health. *Acacia catechu* is one of those plants, described extensively in various ancient "Materia Medica" available in different languages and in different parts of India, as well as in other countries[1]. The modern scientific evidences also strengthen the ancient believes.

Catechu or "Kattha" in Hindi, is prepared from the decoction heart wood of *Acacia catechu*, and is one of the main ingredients in "Paan". Rich in tannins, the catechu also contains various flavonoids, primarily quercetin, quercitrin, catechin, and epicatechin. These various biological active phytochemicals make it a suitable astringent and therapeutic agent with antioxidant, antipyretic, antimicrobial and hepato-protective activities[2].

However, the modern scientific data is still lacking in coping with the variations arising due to climatic and geographical differences in plant growth conditions, and hence, a generalized statement related to the potency of any plant or phytochemical profile is often ambiguous, and may be misleading to the local medicine practitioners and manufacturers, resulting in drugs of low potency. In order to counter these ambiguities, it is essential to investigate the therapeutic properties of locally available plants[3].

Acacia catechu is native to Central India and is one of the prominent trees found in forests of Central India. The present study is aimed in identifying the antidiabetic activities of Catechu, isolated from the local trees of *Acacia catechu* in Central India. The antidiabetic activity is performed as hypoglycaemic potential of the catechu extract under *in vitro* conditions.

MATERIALS AND METHODS

Isolation of catechu

The catechu was obtained using a decoction of heartwood of *Acacia catechu*. The heartwood was obtained from *Acacia catechu* tree bark from local forests of Jabalpur, Central India. The heartwood was chipped to small pieces and decoction was prepared by boiling these chips in water for several hours. The decoction was allowed to stand for several hours, and the sediment was collected as a thick slurry, dried and used as crude catechu for further experiments.

Preparation of catechu extract

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किशोरों एवं किशोरियों की शैक्षणिक उपलब्धि पर अभिभावक प्रोत्साहन के प्रभाव का अध्ययन

श्रीमती आरती कोरी
सहायक प्राध्यापक (शिक्षा संकाय) माता गुजरी महिला महाविद्यालय, जबलपुर (म.प्र.)

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प्रोफेसर शासकीय मोहनलाल हरगोविंददास गृहविज्ञान एवं विज्ञान महिला (स्वशासी) महाविद्यालय, जबलपुर (म.प्र.)

प्रस्तुत शोधपत्र किशोरों एवं किशोरियों की शैक्षणिक उपलब्धि पर अभिभावक प्रोत्साहन के प्रभाव का अध्ययन अध्ययन से संबंधित है। किशोर एवं किशोरियों की शैक्षणिक उपलब्धि पर अभिभावक प्रोत्साहन के प्रभाव के अध्ययन हेतु का डॉ. आर. आर. शर्मा द्वारा निर्मित अभिभावक प्रोत्साहन मापनी एवं डॉ. रैना तिवारी द्वारा निर्मित शैक्षणिक उपलब्धि परीक्षण का उपयोग किया गया। साथ ही सर्वेक्षण विधि का उपयोग किया गया। न्यादर्श हेतु शासकीय एवं अशासकीय विद्यालयों के 400 छात्र एवं छात्राओं का चयन किया। सांख्यिकीय विश्लेषण के लिए मध्यमान एवं मानक विचलन का उपयोग किया गया। परिणाम में पाया कि किशारों की शैक्षणिक उपलब्धि पर अभिभावक प्रोत्साहन का सार्थक प्रभाव पाया गया जबकि किशोरियों तथा किशोर एवं किशोरियों के सम्मिलित समूह पर अभिभावक प्रोत्साहन का कोई प्रभाव नहीं प्राप्त हुआ।

प्रस्तावनाः–

"जननी का हृदय बालक की पाठशाला है, बालक का प्रथम सामाजिक प्रशिक्षण परिवार में माता की गोद में ही होता है।" **एरिक्सन** के अनुसार – "माँ और बालक के बीच में होने वाली प्रारंभिक अनुक्रियाएँ बालक में विश्व के प्रति विश्वास अथवा अविश्वास की नींव डालती हैं।" माता–पिता द्वारा ही बालक के जीवन की प्रत्येक अवस्था में प्रोत्साहन दिया जाता है, जो उसके संपूर्ण व्यक्तित्व विकास में सहायक होता है। अभिभावक–बालक संबंध एक मधुर आनंद और बालकों के संवेगात्मक अस्थिरता के लिए भी महत्वपूर्ण होता है। अभिभावक किशोरों के कठिन काल के वे पथ प्रदर्शक होते हैं, जो उनका सही मार्ग प्रशस्त करते हैं। अभिभावकों का प्रोत्साहन किशोरों में आत्मविश्वास, निर्णय लेने की क्षमता व अनुशासन और अन्य व्यक्तित्व के आयामों में प्रेरणास्रोत के रूप में कार्य करते हैं, जिससे किशोरों को समस्यात्मक परिस्थितियों का सामना करने में सहायता मिल सके। एक अनुसंधान द्वारा अभिभावक प्रोत्साहन का किशोरों की शैक्षणिक उपलब्धि पर सकारात्मक प्रभाव का पता चलता है। यह अनुसंधान **जयास्वामी, एम. सिन्हा, एस.के. कुमारी और अरोरा (2003)** ने झारखण्ड के जनजाति विद्यालय के छात्रों में अभिभावक प्रोत्साहन एवं शैक्षणिक उपलब्धि का अध्ययन करने में यह पाया गया कि छात्रों की शैक्षणिक उपलब्धि पर उनके अभिभावकों की भूमिका और प्रोत्साहन का प्रभाव पड़ता है। इस प्रकार अभिभावक प्रोत्साहन से किशोरों के व्यक्तित्व में निखार आता है। वे अन्य लोगों के साथ मित्रतापूर्ण व्यवहार करते हैं और उनकी शैक्षणिक उपलब्धि प्रगतिशील होती है।

आधुनिक वर्तमान समय में शिक्षा और तकनीकी का विकास होने के साथ ही किशोरों का शैक्षणिक स्तर बदल गया है। इस शैक्षणिक स्तर में बदलाव से उनकी चिंतन–शक्ति, उपलब्धि का स्तर भी बदल गया है। अतः इन बदले हुए आयामों हेतु अभिभावक प्रोत्साहन की एक ताले की चाबी के समान भूमिका होती है जिससे किशोरों में सकारात्मक व्यक्तित्व आयामों का विकास हो और उनके शैक्षणिक स्तर प्रगतिशील बन सकें एवं उनके सुखद भविष्य के लिए अभिभावक प्रोत्साहन प्रेरणादायक मार्गदर्शन प्रदान कर सके।

सम्प्रत्यात्मक रूपरेखा–

बालक की प्रथम पाठशाला उसका परिवार होता है। उसके द्वारा किये गये कार्य उसके व्यवहारिकता को उजागर करते है। अभिभावक के व्यवहारिक पक्ष का प्रभाव बालक के व्यक्तित्व पर दिखाई देता है। अभिभावक द्वारा बालक अपने कार्यों को करने के लिए प्रोत्साहित किया जाता है, जिससे वह अपने कार्य को रूचि के साथ करते है। उनके व्यक्तित्व को सकारात्मक रूप अभिभावक प्रोत्साहन से ही प्राप्त होता है। किशोरों का जीवन काल बहुत ही नाजुक होता है इस अवस्था में बालक को उचित प्रोत्साहन मार्गदर्शक मिलना आवश्यक होता है अभिभावकों द्वारा उचित सकारात्मक प्रोत्साहन बालक को सही दिशा की ओर अग्रसर करता है। जिससे उनमें व्यक्तित्व के शीलगुण सही दिशा में कार्य करते हैं, तथा उनकी विद्यालय में उपलब्धि अच्छी होती है।

डॉ. अजिजि (2002) ने आत्म प्रत्यय प्रेरणा, व्यक्तिगत शैलियों और उपलब्धि के बीच संबंध पर अध्ययन किया जिसके परिणाम स्वरूप पाया गया कि आत्म प्रत्यय और छात्रों की उपलब्धि एवं अभिभावक द्वारा दिए गए प्रेरणा

ORIGINAL RESEARCH PAPER

Home Science

STUDY OF PATTERN AND PERCEPTION OF EXCLUSIVE BREASTFEEDING AND FACTORS AFFECTING BREASTFEEDING AMONG THE MOTHERS OF JABALPUR

KEY WORDS: exclusive breastfeeding, pre-lacteal feed, early initiation of breast feeding, infant formula.

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ABSTRACT

Background – Exclusive breastfeeding means that an infant receives only breast milk from his or her mother or a wet nurse, or expressed breast milk, and no other liquids or solids, not even water, with the exception of oral rehydration solution, drops or syrups consisting of vitamins, minerals supplements or medicines. But it has been observed that the practice of breastfeeding is not properly followed by mothers.

Aims: To study the pattern and perception of exclusive breastfeeding and factors affecting breast feeding practices among the mothers.

Materials & Methods: Cross sectional study was conducted by collecting data in a pretested questionnaire from 500 mothers who visited outpatient department of Pediatrics department in NSBC Medical College, Jabalpur, Madhya Pradesh between July 2015 to August 2016.

Results – Approximately 49.6% of mothers initiated breast feeding within the first hour after delivery and 28.4% of respondents gave pre-lacteal feed to infants in whom the most common feed was honey (52.11%). The majority of respondents (78.4%) were aware of exclusive breastfeeding. 79.6% of the respondents know the importance of breast feeding. Among participants who did not gave exclusive breastfeed after delivery, the most common type of milk given other than breast milk was infant formula milk (49.07%) and cow milk (35.18%).

Conclusion – The study finding indicates that mother's educational status and type of family were significantly associated with exclusive breastfeeding. There is still lack of awareness regarding breast feeding among mothers of Jabalpur region of Madhya Pradesh which can be improved by more intensive work by health care providers.

INTRODUCTION

Breast milk is the main source of nourishment in the first year of life for healthy growth and development of infants. Mother milk has valuable composition which is best for the growing children.[1] The nature has made mother's milk sufficient enough to meet the needs of the infant. WHO and UNICEF have recommended exclusively breastfeeding to the infants for first six months of life.[2] Exclusively breastfed has been defined as giving breast milk (including expressed breast milk or breast milk from a wet nurse) but allowing the infant to receive ORS, drops, syrups (vitamins, minerals, medicines), and nothing else.[2]

Exclusively breastfeeding practice not only provide benefits to mother and child but also the society get benefitted as the exclusively breastfeeding practice can save health care cost.[3] According to UNICEF 2018, the worldwide exclusive breastfeed rate of infants is 41% and in India it is 54.9%.[4]

Colostrum is the first milk produced after delivery and it is ... of infants as it is highly

with infants aging up to 12 months. After obtaining institutional ethical clearance the data was collected from 500 mothers by random sampling techniques, who attended with their children in the outpatient department of Pediatrics in NSBC Medical College, Jabalpur between July 2015 to August 2016.

Inclusion criteria –

The mothers between 18 to 35 years visiting OPD of Pediatrics department for treatment of their child and were willing to give required information after informed consent. Only those mothers whose child was below 12 months of age were included in the study.

Exclusion criteria –

Mothers who did not gave consent; mothers who were more worried for the health condition of their child and those children who need hospitalization were also excluded from the study. The children who were brought by the relatives of mother or father were also excluded.

A pretested questionnaire consisting different questions was

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Colostrum awareness and its associated factors among mothers of Jabalpur region

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Abstract :-

Background :– World health organization recommends that colostrum is a perfect food for every newborn. Colostrum nourishes and protects newborn from various infectious diseases and should be initiated within the first hours after birth. It has been observed that the practice of colostrum feeding is not properly followed by mothers. The objective of the study was to assess the colostrum awareness and its associated factors among mothers.

Methods :- A cross-sectional study was conducted. The data collection was done through pretested questionnaire regarding colostrum awareness among mothers attending outpatient department of Pediatrics department of NSBC Medical College, Jabalpur, Madhya Pradesh.

Results :- This study shows that 70.2% mothers had awareness about colostrum. There was significant association between mother's awareness about colostrum and education status of mother ($p<0.001$), family type of mother ($p<0.001$).

Conclusion :- The study finding indicates that lack of awareness about colostrum was higher among illiterate. There is still lack of awareness regarding colostrum among mothers of Jabalpur region which can be improved by more intensive work by health care providers.

knowledge, infectious

Introduction :- Colostrum is bright yellowish thick milk secreted in the first few days after birth. It is rich in nutrients and contains anti-infective substances. These anti-infective substances protect the infant from various infectious diseases such as diarrhea, respiratory tract infection etc. Colostrum is the first immunization of child received from mothers (Kakati et al., 2016). Newborns have premature digestive system which suits the low-volume concentrated form of nutrient supply system of colostrum. The laxative effect of colostrum encourages passage of baby's first stool, meconium. This helps to clear excess bilirubin which is produced in large quantities at birth and helps prevent jaundice (Joshi et al. 2012)

It is recommended to introduce colostrum to the new born infant and should not be discarded. But many previous studies have reported that 30-40% of Indian mothers discard the colostrum (Jethi and Shriwastava, 1987). In many developing countries, mothers discard colostrum for their traditional beliefs such as it is dirty milk which have no nutritional values and delay the initiation of breast feeding (Mukherjee and Das, 2016).

There are 170 million underweight children around the world, 3 million of whom die each year as a result of being underweight. WHO recommends that all children be exclusively breastfed for 6 months. Feeding colostrum in the first hour is the first step. It is imperative that every child receives colostrum to get ahead in the race against malnutrition. In India only 15.8% of

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Govt. M.H. College of Home Science and Science for Women, Jabalpur (M.P.)

The title of the paper is **"TOXIC EFFECT OF VARIOUS CONCENTRATION OF FERTILIZERS ON CHANNA PUNCTATUS (BLOCH)"** which is original and innovative. It is done double blind peer reviewed. This research paper is published in **Volume IV, Issue 4, April, 2019, Page No. 106-109.**

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Effect of E-Commerce Trend on Consumers' Buying Behaviour in Chitrakoot City

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Abstract :- The current research was undertaken to understand the Consumer intention to purchase through E-commerce Web sites. A survey of 100 Consumers of Chitrakoot city was conducted through Questionnaire method. The results indicate that the Consumer intention to purchase online is influenced by utilitarian value (like time saving), attitude toward E-commerce, availability of information . In this study, results drawn out Consumer choose Designer clothes mostly and select safe method of transaction (Cash on Delivery.) The current research focuses on understanding the shopping trend of Consumer in Chitrakoot city.

Key words- Trend, E-commerce , Consumer.

Introduction :- commerce has experienced rapid growth in the last few decades. The internet has changed the why consumers buy goods and services throughout the world and it is based on Business to consumer (B2C) and business to business (B2B).

A Whole day of shopping is the dream of everyone especially young ones.....It is true fact, which can be unchanging. Particularly Consumer motivated for E-commerce by a variety of different reasons including socialising, enjoyment, trend and most important 'FASHION'. Now days, there is a boom in online purchasing, which are magic for consumers in their hand. Internet commerce involves the sales and purchase of products and services over the internet. This new style of shopping made has been called "E-commerce", e-shopping, Internet shopping, Electronic shopping and Web Based shopping.

This Paper is based on E-commerce of Consumer in Chitrakoot city .The reason of this research to know the craziness of E-commerce in Consumer and we should know their awareness about E-commerce, like website, transaction method , products and so on.

Trend - " A general tendency to change, as of opinion.....It simply reflects what seems to be going around at any given time."

E-commerce - "E-commerce or e-shopping is a form of electronic commerce which allows consumers to directly buy Goods and Services from a seller over the internet using a web browser. Alternative names are – e-web store, e-shop, e-store, Internet shop, web –shop, web store, online store, and online storefront etc."

Review of Literature-

Jones and Kim (2010) stated that in their study examines the influences of retail brand trust on online purchasing. Data for the study were collected from 200 young female US consumers who completed online survey. Participants were asked to select one of three pre determined apparel retail online brands that they have either had experience with or were familiar with. Respondents were then asked to keep their selected retailer in mind when completing the questionnaire and were also asked briefly visit the website shopping for a shirt or blouse. Factor correlation analysis were conducted to test their hypothesis.

Peng (2010) has reported that with new wireless technology constantly being developed, E-commerce is increasingly common now days. People can search for and buy products online

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IMPACT OF COVID - 19 ON ONLINE SHOPPING IN JABALPUR CITY

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ABSTRACT

As the world responds to the corona virus (COVID-19) pandemic, we're seeing a dramatic shift from in-person to online shopping. Consumers are relying on the digital world more than ever and businesses are forced to adapt their strategies and shift toward digital transformation with much more urgency than before. Elaboration of the Internet has increased the prominence of online purchase channels. The current research was undertaken to understand the consumers' intention to purchase through online shopping Web sites in covid-19 period. A survey of 100 consumers of Jabalpur city was conducted through Questionnaire method. The results indicate that the consumers' intention to purchase online is influenced by Covid–19 because lockdown period was going on, no movement was allowed and no one can directly touch anything, due to corona virus fear, so most of the people did online shopping. In this study, results drawn out consumers choose mobile recharges and grocery mostly and select method of transaction Debit card (plastic money). The current research focuses on understanding the online shopping trend of consumers in covid-19 in Jabalpur city.

KEYWORDS: *Impact, COVID-19, Pandemic, Online Shopping*

COVID-19: *"Corona virus disease 2019 (COVID-19) is defined as illness caused by a novel corona virus now called severe acute respiratory syndrome corona virus 2 (SARS-CoV-2; formerly called 2019-nCoV), which was first identified amid an outbreak of respiratory illness cases in Wuhan City, Hubei Province, China."*

Pandemic: *"A pandemic is defined as "an epidemic occurring worldwide, or over a very wide area, crossing international boundaries and usually affecting a large number of people". The classical definition includes nothing about population immunity, virology or disease severity."*

Impact: *"Measure of the tangible and intangible effects (consequences) of one thing's or entity's action or influence upon another."*

Online Shopping: *"online shopping or e-shopping is a form of electronic commerce which allows consumers to directly buy Goods and Services from a seller over the internet using a web browser. Alternative names are – e-web store, e- shop, e-store, Internet shop, web –shop, web store, online store, and online storefront etc."*

पूर्व–शालेय बालक एवं बालिकाओं की बाल–संगोपन गतिविधियों में पिता की सन्निहिति पर परिवार की प्रकृति एवं परिवेश के प्रभाव का अध्ययन

सिद्धि पाण्डे[1]
डॉ. श्रीमती गीता शुक्ला[2]

सारांश–

प्रस्तुत शोधकार्य का उद्देश्य बालक, बालिका एवं इनके सम्मिलित समूह की बाल–संगोपन गतिविधियों में पिता की सन्निहिति पर परिवार की प्रकृति एवं परिवेश की प्रकृति के प्रभावों का अध्ययन करना था। इस हेतु एकल एवं संयुक्त परिवार के शहरी एवं ग्रामीण क्षेत्र के 50–50 बालक एवं बालिकाओं के पिताओं को न्यादर्श में चयनित किया गया। प्रदत्त संग्रह के लिए रीता चौपड़ा की पैरेंटल– इन्वाल्वमैंट–इन्वेन्ट्री के साथ–साथ शोधकर्ता द्वारा निर्मित पैरेंटल इन्वाल्वमैंट इन्वेन्ट्री का उपयोग किया गया। न्यादर्श में चयनित बालक एवं बालिकाओं के पिताओं पर प्रश्नावली का व्यक्तिगत रूप से प्रशासन किया गया। विश्लेषण के उपरांत जो निष्कर्ष निकले उनसे ज्ञात होता है कि एकल परिवार के ग्रामीण बालकों एवं बालक–बालिकाओं के सम्मिलित समूह के बाल–संगोपन में पिता की सन्निहिति सबसे अधिक है। अतः बालक एवं बालक तथा बालिकाओं के सम्मिलित समूह के बाल–संगोपन में पिता की सन्निहिति पर परिवार की प्रकृति एवं परिवेश की प्रकृति का सार्थक प्रभाव पड़ता है जबकि बालिकाओं के बाल–संगोपन में पिता की सन्निहिति पर परिवार की प्रकृति एवं परिवेश की प्रकृति का सार्थक प्रभाव नहीं पड़ता है।

आधुनिकीकरण के परिणामस्वरूप समाज की प्रथम इकाई परिवार में महत्वपूर्ण एवं सार्वभौमिक परिवर्तन हुए हैं। शिक्षा के उन्नयन एवं रोजगार प्राप्ति के अवसरों के परिणामस्वरूप परिवारों का विघटन हुआ है। औद्योगीकरण एवं नगरीकरण की प्रक्रिया ने संयुक्त परिवार को सर्वाधिक प्रभावित किया है। विज्ञान एवं तकनीक की प्रगति के फलस्वरूप प्रतियोगिता गला–काट हो गई है। इन सबके फलस्वरूप मँहगाई बढ़ गई है जिसके कारण अब पुरुषों के साथ में महिलाओं को भी कार्य क्षेत्र में उतरना पड़ रहा है जिसके कारण रोजगार के नये अवसर प्राप्त करने एवं पाश्चात्य संस्कृति के प्रभाव के परिणामस्वरूप व्यक्तिवाद की भावना के कारण लोग संयुक्त परिवार को छोड़कर बाहर जाने लगे हैं और संयुक्त परिवार की व्यवस्था भंग होती जा रही है तथा एकल परिवारों की संख्या बढ़ने लगी है। सामाजिक व्यवस्था में आए परिवर्तनों ने परिवार में सदस्यों की भूमिका को भी प्रभावित किया है। संयुक्त परिवार में जहाँ दादा–दादी, चाचा–चाची, ताई–ताऊ, आदि बाल–संगोपन गतिविधियों में सहयोग एवं मार्गदर्शन करते थे, वहीं अब एकल परिवारों में इस प्रकार के सहयोग एवं मार्गदर्शन का अभाव हो गया है। परिणामस्वरूप इस कार्य का सारा उत्तरदायित्व माता पर आ गया है। परिवार को आर्थिक सम्बल प्रदान करने के लिए माता का व्यवसाय में लगे होने के कारण शिशु पर पर्याप्त ध्यान देने के लिए पिता का सहयोग करना आवश्यक हो गया है। इस कारण परिवार में संतुलन बनाने के लिये पिताओं ने अपनी सन्निहिति को बाल–संगोपन गतिविधियों में बढ़ाया है। एकल एवं संयुक्त परिवारों के संदर्भ में परिवारों की भूमिका भिन्न हो जाती है क्योंकि इन परिवारों की प्रकृति के कारण प्रत्येक सदस्य की भूमिका भिन्न हो जाती है, यह भी महत्वपूर्ण है कि विकासात्मक दृष्टिकोण से पिता एवं बच्चे की भूमिका विकास के विभिन्न परिप्रेक्ष्य में देखी जा सकती है, इनमें संज्ञानात्मक, सामाजिक, संवेगात्मक क्षमताएँ भिन्न हो जाती हैं एवं इसे इस दृष्टिकोण से भी देखा जाना चाहिए। बच्चे का लालन–पालन एक ऐसा कार्य है, जिससे सभी पारिवारिक सदस्यों की अलग–अलग भूमिका रहती है, परंतु उसे समग्र रूप से देखा जाना आवश्यक है, जिसमें अलग–अलग सदस्यों की भूमिका में टकराव न हो जिसका बच्चे के संतुलित विकास पर प्रभाव न पड़े, इसमें परिवार की भूमिका महत्वपूर्ण हो जाती है। एकल एवं संयुक्त परिवार के साथ–साथ शहरी एवं ग्रामीण परिवेश भी बच्चों के लालन–पालन पर अपना विशिष्ट प्रभाव डालते हैं, अतः शोधकर्ता ने यह देखने का प्रयास किया है कि क्या परिवार की प्रकृति के साथ परिवेश की प्रकृति का भी प्रभाव बच्चे के लालन–पालन में पिता की सन्निहिति को प्रभावित करता है जिससे किसी भी परिस्थिति में विपरीत प्रभाव बच्चे के विकास पर न बने।

अमान्डा हर्मीत्त (2017) ने अपने शोध में बाल–संगोपन या बालकों के लालन–पालन मे पिता की भूमिका का अध्ययन किया। हालाँकि माँ एक बालक की पहली और प्राथमिक देखभालकर्त्ता होती है लेकिन पिता की भूमिका भी अच्छी तरह से समायोजित, प्रसन्न और सफल बच्चे के विकास में अत्यंत महत्वपूर्ण है। अलग–अलग शक्तियों और शैलियों को लाने में माता–पिता की भूमिकाएँ एक–दूसरे की पूरक होती हैं। बालकों को प्यार और समर्थन देने में माता–पिता दोनों की सन्निहिति की आवश्यकता होती है। इसी संदर्भ में **नादिया, हेरिस और डिमाण्ड मीडिया (2001)** ने अपने अध्ययन में पाया कि मनोवैज्ञानिक एवं पारस्परिक रूप से बाल–संगोपन में माताओं की भूमिका के साथ, समय के साथ ही पिताओं

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STUDY OF MAN-MONKEY CONFLICT AND ITS MANAGEMENT IN KUNDAM, MADHYA PRADESH, INDIA

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ABSTRACT
The struggle between man and monkey has been an old problem. It is because of ever-increasing urbanization and other human activities which take a toll on forest and wildlife. As the urban area is increasing, the forest areas are decreasing. Therefore, the monkey habitation faces problems which results in man-monkey conflicts.
Keywords : Kundam, Forest, Monkey, Conflict.

INTRODUCTION
Monkey is important components of the Indian biota, culture and its mythology believes the monkey god (Narasimmarajan et al., 1995). Man- monkey association is as old as man's own existence of nearly 225 living species of non-human primates; three Indian species have become urbanized. They are the Rhesus macaque (Macaca mulatta), the Bonnet macaque (Macaca radiata) and the Hanuman langur (Semnopithecus entellus). Human population growth and activities like deforestation, agriculture and urbanization lead to an ever increasing encroachment and wildlife habitats. Reduction of wild animal's natural habitats altered into small marginal patches. Conflicts often occur when non-human primate's raid crops (Sharma et al., 2011).

Monkey has always been intimately associated with the lives of the people of the Indian sub-continent. This relationship however can be amazingly variable in the Indian view the man- monkey relationship is very exceptional. On one side people kill and eat their flesh as food and consume blood as medicine, on the other side people keep them as pets, trained them to play and worshipped the form of Hanuman, the god of wind. Urbanized population are provisioned frequently due to religious sentiment of people.

So human attitude towards monkey differ from area to area and species to species, likewise monkey are not liked in the areas of massive agriculture, horticulture and other plantations since they raid and damage the crop and orchards.

In such areas they are considered pests (Roonwal and Mohnot, 1977) in another situation monkeys have become commensalism and competitors of human being in and around villages town and cities, these are urbanized monkey (Rajpurohit et al., 2006).

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FISH HEALTH AND DISEASES : AN OVERVIEW

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ABSTRACT

Dealing with the interaction between immune system and invading pathogens in bony fish requires long term of studies. Thorough studies on specific cellular (T-cell) responses and innate immunity (lectins, lysozyme, interferon, phagocytic cells) became available later. In the period between 1980 and today an overwhelming amount of data on regulation (e.g. cell cooperation, cytokines) and cell surface receptors (e.g. T-cell receptor; MHC) was published. It became also clear, that innate responses were often interacting with the acquired immune responses. Fish turned out to be vertebrates like all others with a sophisticated immune system showing specificity and memory. These basic data on the immune system could be applied in vaccination or in selection of disease resistant fish. Successful vaccines against bacterial diseases became available. Effective anti-viral vaccines appeared from the 1980s onwards. There is no doubt, that Fish Immunology has become a flourishing science by the end of the 20th century and has contributed to our understanding of fish diseases as well as the success of aquaculture.

Keywords: Fish, Disease, Health, Aquaculture.

INTRODUCTION

The fastest growth of aquaculture sector (allover the world) is now being increasingly felt. However, diseases are increasingly recognized as a potential constraint on aquaculture production and trade and cause health hazards to man and massive financial loss, either through fish mortalities or reduced meat quality, resulting in reduced profit margins. The economic loss to aquaculture due to the disease problem is much higher than that caused by any other means. Effective way to control or prevent disease problems in any system is through effective management of stock, soil, water, nutrition and environment. As the proper management is not always effective, pathogens establish in the animals and produce the disease and subsequently if these pathogens have health hazards to consumers and/or handlers leading to zoonotic problems, to prevent disease occurrence in human indirectly by preventing its occurrence in animals via immuno-potentiating against broad-spectrum range of pathogens.

The use of chemicals to control bacterial or parasitic populations brings a lot of disadvantages. Similarly, the wide use of antibiotics to treat bacterial diseases resulted in many demerits. Vaccination is a useful prophylaxis and effective method for controlling of infectious diseases of fish. But there are only few successful commercial bacterial vaccines available. The range of bacterial infections for which vaccines are commercially available now comprises classical vibriosis (Listonella anguillarum, Vibrio ordalii), furunculosis (Aeromonas salmonicida subsp. salmonicida), cold-water vibriosis (Vibrio salmonicida), yersiniosis (Yersinia ruckeri), pasteurellosis (Photobacterium damselae supsp. piscicida),

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TRADITIONALLY USED PLANTS IN MAHAKOSHAL REGION OF MADHYA PRADESH : A REPORT

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ABSTRACT

Traditionally used plants of India express out the socio-cultural roots of various plants found in the Indian subcontinent, not only telling us their medicinal values but also asserting their ecological importance to our survival. So, probably this became the basis of conserving plants and might have started worshipping plants. The present study provides the information regarding traditional value of plants in mahakoshal region of India. During the survey 25 plant species of angiosperms have been enumerated which are being used by the people in various social and religious customs. Folklore, culture, food and medicinal practices are deeply linked and influenced by plants.

Keywords : Mahakoshal, God, Tradition, Flora.

INTRODUCTION

Thousands of years ago, India's greatest sages established Ayurveda, or knowledge of life, the main goal of which was the alleviation of human suffering. The sages of Ayurveda saw all illness and all health as part of an interlocking whole-mind body and spirit that must be treated as one. For medicines and treatments, they looked to the natural world around them, to the plants used by forest tribes since the beginning of history. Man secured his life from diseases by using various parts of medicinal plants. Conservation of natural resources has been an integral part of several indigenous communities in different parts of the world. Nature worship has been a key force in determining human attitudes towards conservation and sustainable utilization of biodiversity. Mahakoshal region encompasses many plant species which are being used as food, shelter, clothing and medicines by the people of village communities. Besides these, some plants are used by the people in different social and religious customs, are known as Socio-religious plants (Ahirwar, 2010). The relationship between man and plant communities is as old as his hunger, and long before science was born, our ancestors studied the plants around them to meet their basic requirements, which laid the foundation of civilization (Pandey and Verma, 2005). Many festivals are associated with the significance of plants in India (Dashora et al., 2010).

MATERIAL AND METHODS

Mahakoshal lies in the upper or eastern reaches of the Narmada River valley in the Indian state of Madhya Pradesh. Jabalpur is the largest city in the region. The Vindhya Range forms the northern boundary of the region; north of the Vindhya Range lie the regions of Malwa to the northwest, Bundelkhand to the north and Bagelkhand to the northeast. Chhattisgarh state lies to the east, and the Vidarbha region of Maharashtra state lies to the south across the Satpura Range. During the year 2018 and 2019 the different area of Mahakoshal were surveyed and covered extensively to record the socio-religious role of plants. The information collected based on intensive interviews and long discussions with villagers of this region regarding the uses of plants in different rites and rituals. All the plants were recorded and identified by consulting the available literatures by Roy *et al.*, (1992), Mugdal *et*

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CERTIFICATE

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Photoluminescence Studies Of Cerium Doped Strontium Aluminate Nanophosphors ($SrAl_2O_4$:Ce)

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Abstract. The present paper reports synthesis and characterization of trivalent Cerium (Ce^{3+}) doped Strontium Aluminate ($SrAl_2O_4$) nanophosphors. Pure and doped strontium aluminates were prepared their characteristics were studied and compared. .The prepared samples were characterized by X-ray diffraction technique (XRD) with variable concentration of Ce (0.05-0.8 mol %), no phase change is found with increase in concentration of Cerium (Ce). The FTIR Studies were also done which confirm the composition of prepared phosphor .Effect of variable concentrations of Cerium on Photoluminescence (PL) was studied. In photoluminescence (PL) studies the excitation wavelength was found around 320 nm and an intense broad emission peak appears around 380 nm which may be due to the 5d-4f transition. Photoluminescence peak intensity versus concentration graph shows that intensity is maximum for 0.4 mol % of doping concentration, and then it decreases with further increase in doping percentage .Sample was prepared by Combustion technique which is less time taking and suitable for large scale produetion of nanophosphors.

INTRODUCTION

Phosphors are the solid material that emits light, when exposed to radiation such as ultraviolet light or an electron beam. Phosphors display the property of luminescence. Phosphors are made from a variety of materials and different combinations are appropriate for different applications. Thousands of phosphors have been synthesized todate, each one having its own characteristic, colour of emission and period of time during which light is emitted after excitation ceases. The alkaline earth aluminate, $SrAl_2O_4$ is one of the most important persistent luminescent materials (phosphor). Their high initial luminescent intensity and low-dimensional long afterglow property makes the strontium aluminate phosphors an ideal substance to be widely used in many fields such as luminescent paint, luminescent plastic, luminescent ceramic, etc., and may lead to future nanoscale display devices [1–3]. Their afterglow lifetime and intensity can be enhanced by co-doping with some of the rare earth ions [4–6]. Rare earth ions co-doped with strontium aluminate ($SrAl_2O_4$:Ce) phosphors are one of the most efficient long afterglow materials with an excellent persistent luminescence in the green region. Compared with sulfide phosphorescent phosphors, $SrAl_2O_4$:Ce phosphor possesses safer, chemically stable, very bright, and long-lasting photoluminescence (PL) with no radiation, which results in an unexpectedly large field of applications, such as luminous paints in highways, airports, buildings, and ceramics products, as well as in textiles, the dial plates of glow watches, warning signs, and escape routines, etc. [7–12].

The grain size of phosphor powders prepared through the combustion synthesis method is in several tens of nanometers. Various approaches, such as chemical synthesis techniques, co-precipitation [8], and sol–gel method have been applied to prepare $SrAl_2O_4$ and/or its phosphors [13]. These methods can produce small particles at low temperatures; however, the phase purity remains a problem. Phosphors of small particles must be obtained by grinding the larger phosphor particles. Those processes easily introduce additional defects and greatly reduce luminescence efficiency [15]. The combustion process to prepare the sample, is very facile and only takes a few

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DIVERSITY, STATUS AND FLIGHT PERIOD OF BUTTERFLY (LEPIDOPTERA : RHOPALOCERA) IN NARMADA RIVER BHEDAGHAT, JABALPUR (M.P.)

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ABSTRACT

Butterflies are one of the most important assemblages of insects that act as biodiversity indicators as well as nature's gardeners. There are about 28,000 known butterfly species in the world. Butterfly (Lepidoptera) were studied in Narmada river Bhedaghat Jabalpur as part of an extensive study of biodiversity. This paper presents Diversity, Status and Flight Period of butterfly from Narmada region having aggregation of up to 21 species belonging to 5 families and categories on the basis of their abundance. The Narmada River Bhedaghat is surrounded by agricultural fields with rural habitation. Not enough research work on Butterfly has been reported from this neglected biodiversity spot of Narmada region, may be, this is the pioneer work done on the subject matter. This study is aimed towards contributing to the plane of biodiversity restoration in studied region and development of management strategies so as to ensure sustenance of butterflies and ecosystem services derived from them.

KEYWORDS: Narmada River, Diversity, Host Plant, Pollination, Butterflies.

INTRODUCTION

Butterflies are the most beautiful and colorful creatures on the earth and have a great aesthetic value. Generally observed, butterflies play an important role in maintaining the balance of nature and health of the living world. Butterflies are generally regarded as one of the best taxonomically studied group of insects. Worldwide there are more than 28,000 species of butterflies; with about 80 percent found in tropical regions (Robbins and Oplar, 1997). It may be noted that Antarctica is the only continent on which no Lepidoptera (butterflies) have been found.

The number of Indian butterflies amount to one fifth of the world of butterfly species. Butterflies enable sustenance of ecosystem services through their role in pollination and serving as important food chain components. Being potential pollinating agents of their nectar plants as well as indicators of the health and quality of their host plants and the ecosystem as a whole, exploration of butterfly fauna thus becomes important in identifying and preserving potential habitats under threat. Lepidoptera is one among the highly specialized insect orders, included scaly winged insect of the holometabolous endopterygote series. Butterfly shows total metamorphosis and pass through various stages such as egg, larva, pupa and adult stage. Bhedaghat created an excellent habit and source of alteration for many faunal species like insects, reptiles, birds and mammals. The area is surrounded with a very large variety of trees, mini forest, vast grassland & small hills; these are the elements for architecting a preferred habitat or such species.

The Indian subcontinent bearing a diverse terrain, climate and vegetation to hosts about 1,501 species of butterflies (Gaonkar, 1996). About 1500 species of butterflies are found in India (Haribal, 1992). Some butterflies are migratory. They fly thousands of miles in the winter to places having a warmer climate, and return back in the spring. Butterflies serve as important plant pollinators in the local environment, and help to pollinate more than 50 economically important plant crops (Borges *et al.*, 2003). Butterflies are also good indicators of environmental changes as

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A DETAILED LIST OF ODONATA AND LEPIDOPTERA RECORDED FROM GWARIGHAT REGION OF RIVER NARMADA, JABALPUR (M.P.)

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Abstract:
River Narmada is the fifth largest westwards flowing river of India. Biodiversity protection and conservation is a national and international agenda and responsible for sustainable development of a region or a country and secondly Lepidoptera and Odonata are potential bio control agents of many invertebrates. Lepidoptera and Odonata assemblage along with river Narmada bank of Gwarighat region in Jabalpur has been investigated. A total of 41species have been distributed in two orders Odonata with 22 species and Lepidoptera with 19 species were sampled. Libellulidae with 9 species under order Odonata and Nymphalidae with 9 species under Lepidoptera are the most dominating families while others have fewer representatives. Mostly organisms were aggregated due to habitat specific nature and random distribution indicates availability of resource utilization to survive but, in the urban forest area, high anthropogenic disturbances were observed which creates high biotic pressure on forest. A detailed list of Odonata and Lepidoptera recorded from urban forest area is presented.
Keywords: Biodiversity, Lepidoptera, Odonata, Species Richness, River Narmada, Conservation

INTRODUCTION

Biodiversity conservation and management are worldwide concern (Ramesh et al., 2010), where determining the diversity levels of indicator groups of ecosystem should permit the prediction of other taxa to be present i.e., the importance and appropriateness of using invertebrate groups as indicator (Oliver and Beattie, 1993; Pearson, 1994). Biodiversity loss is one of the world's most pressing crisis and there is global concerned about the biological resource on which so much human life depends. The biological change that environmental degradation brings about and enumerated pollution and introduced species as the main cause for the decreased in biodiversity around the world. Relating patterns of biodiversity to spatial phenomena is becoming increasingly important in community ecology and related disciplines such as conservation biology (Spencer et al., 2002). Alternatively, local environmental conditions may prevail because certain species depend on a given set of environmental conditions for survival. Both of these processes are likely to act in concert to determine patterns of community similarity within and among habitats. Partitioning ecological variation exhibited by communities into that explained by purely spatial and that explained by purely environmental phenomena is crucial to understanding the mechanisms behind patterns of biodiversity (Borcard et al., 1992; Condit et al., 2002 and Duivenvoorden et al., 2002).

To focus on the conservation of biodiversity has recently received attention. Various studies and protocols have been proposed to test the appropriate patterns of biodiversity (Wilson, 1988; Noss, 1990; Enrlich and Wilson, 1991) and (Wright et al., 1991) also classified a hierarchical composition of different level of organization as well as groups of

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SURVEY OF DUNG BEETLE DIVERSITY IN JABALPUR (M.P.)

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ABSTRACT : A survey of dung beetle diversity was conducted in the area of Jabalpur. The surveys were conducted during the active season from (April-October) of dung beetles at total eleven sites, *viz.*, Gour river, Dumna nature reserve, Mandla road, TFRI forest, Bargi, Narmada river, Bhedaghat, RDVV side, Adhartal, Sihora road and Ranjhi. These sites comprise all types of habitats, *i.e.* forest areas, river banks, grasslands, road sides and domestic areas. Dung beetles were collected by bait traps, baited with different kinds of dung especially with cattle dung. A total of 1648 dung beetles were collected under 25 species, 9 genera and 3 subfamilies by performing each site with single to three visits. Some of the dominant species of dung beetle were *Onthophagous mopsus*, *O.catta*, *O.bonasus*, *Oniticellus spinipes* and *Aphodius lividus*. The surveys were conducted only to check the dung beetle fauna present in the regions of Jabalpur and surrounding areas. Some beetles were attracted to only a specific type of bait Neelgai (*Boselaphus tragocamelus*) dung. This specificity of preference is also an important aspect for further research. The fauna recorded was found on declining rate during the survey in comparison to earlier records of dung beetle fauna from the area.

Key words : *Dung beetles, Diversity, Species composition.*

INTRODUCTION

Dung beetles are nature's scavengers burying a large amount of dung into the ground and clean up the environment. Dung beetles are also taxonomically important component of terrestrial ecosystem. A variety of factors may influence the presence and distribution of coprophagous beetles in a given area, including fauna, flora, solar radiation, temperature, soil type, soil pH, rainfall and most importantly, the supply of excrement for food (Fincher *et al.*,1970). Dung is patchy and ephemeral; desiccation and some of the stiffest competition among arthropods often limits its period of availability to only a few hours. In tropical and temperate localities, thousands of individuals and dozens of species may be attracted to a single dropping (Hanski and Cambefort,1991). These animals are believed to be a good indicator for the health of a habitat. A study for the composition, abundance and community structure was conducted in Jabalpur area comprising of different types of habitat.

MATERIAL AND METHODS

Collection of dung beetles by bait trap method was done from the different sites in Jabalpur during April to October. Dung beetle collection was done by using different mammals dung like cattle, nilgai and monkey. Some of the dung beetles were collected by manual collection from the dung pads found at the study sites naturally. So, Collection methods were used mainly by bait trap, manually and sometimes by digging their burrows underneath the dung pad. All of the eleven sites could not be visited equally during their active season, some places which were nearby visited more frequently and the distant ones were visited once only. The collected fauna of dung beetles was identified with the help of literature, reference collection and expertise available in the department.

RESULTS AND DISCUSSION

A total of about 1648 individual of 9 genera comprising 25 species of three subfamily of Scarabaeidae (Coleoptera) were captured from total eleven selected sites of Jabalpur and surrounding. The group of Scarabaeidae was represented by three subfamilies *i.e.*, Aphodiinae, Hybosorinae and Scarabaeinae. In the total collection of dung beetles maximum contribution was from subfamily Scarabaeinae (87.1%) followed from Aphodiinae (9.5%) and least from Hybosorinae (3.4%) (Fig.1). Scarabaeinae represented total 7 genera including (*Onthophagus*, *Onitis*, *Oniticellus*, *Copris*, *Cathrsius*, *Sisyphus* and *Gymnopleurus*) containing 20 species. *Aphodiinae* and *Hybosorinae* comprising only single genus respectively *i.e. Aphodius* and *Hybosorus*. Under the family Scarabaeinae, the genus *Onthophagus* was represented by 6 species, *Onitis*, *Copris* and *Cantharsius* by 3 species each, *Oniticellus* and *Gymnopleurus* by 2 species each and *Sisyphus* by 1 species only. In Aphodiinae, genus *Aphodius* was represented by 3 species and family Hybosorinae was represented with genus single *Hybosorus* by 2 species. The species *Ontophagus catta* (251), *O.bonassus* (156), *O.mopsus* (84), *Onitis philimon* (98), *Oniticellus spinipes* (56), *O.cinctus* (60) were found more abundant.

Out of three subfamilies in Scarabaeinae *O.catta* and *O.bonasus* were most abundant. The subfamily Scarabaeinae was most abundant among these three. Out of total collection from 1648 individual maximum of 1420 (20 species) were from subfamily Scarabaeinae, 168 (3 species) were collected under Aphodiinae and Hybosorinae was only comprising 60 (2 species) among these three subfamily. If we compare the site wise data we found 271 individuals of 23 species from Gour river side, 136 individuals of 20 species from Dumna nature reserve, 169 individuals of 23 species from Mandla road, 195 individuals of 22 species TFRI forest, 19 species comprising 119 individuals from Bargi, 19 species with a total

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PESTICIDE EXPOSURE ON HEMATOLOGICAL AND BIOCHEMICAL PARAMETERS OF FARMERS IN PANAGAR, JABALPUR DISTRICT (M.P.)

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Abstract
Blood is a liquid connective tissue of body. It delivers communication between the cells of different parts of the body. The study of the Profenofos sprayer blood parameters are significant for determining factors related to their health. An insecticide Profenofos used on a wide variety of crops to control many pests but it also adversely affect health of sprayers. The objective of present study was to investigate the long term exposure effects of Profenofos on liver enzymes and hematological parameter of occupationally exposed farmers or traders. The results of this study showed that Profenofos have some effects on the hematological and liver enzyme parameters. Under exposer of Profenofos was found to have an effect on TLC, Lymphocytes count and mean corpuscular hemoglobin concentration (MCHC). Medical diagnosis is needed to analyze Profenofos toxicity; also in case of occupational overexposure medical intervention is essential. Upper normal levels of Total Bilirubin (TBIL) and Direct Bilirubin (DBIL) were observed in serum of some Profenofos exposed workers were significantly high while SGOT and SGPT were normal. Also alkaline Phosphatase value was elevated significantly.
Keywords : *Pesticide, Farmer, Profenofos, Hematological, liver enzyme Parameters.*

INTRODUCTION

The use of pesticides has increased food production with increasing population in many parts of the world. Exposure to pesticides in the recent years has increased manifold due to their intense application and such the risk of occupational hazards have also multiplied tremendously. Humans may be exposed to pesticides through their occupation, accidental, or inertial routes. Some of these chemicals accumulate and persist in human tissues due to their lipid solubility and resistance to metabolism as organochlorines (Jandacek and Tso, 2001). India is primarily an agro-based country having population about 1-27 billion. However, 70% of the population lives in villages and mostly involved in agriculture directly or indirectly. According to WHO (2010) approximately 25 million pesticides poisoning cases occur annually among agricultural workers in developing countries. Organophosphatases, also known as cholinesterase inhibitors, are widely used pesticides that may cause poisoning after accidental or suicidal exposure (Curl et al., 2002; Weiss et al., 2004; Alavanja et al., 2004; Akca et al., 2005). The initial residues of Profenofos in plants was 52.1 ppm with half life values of 52.08 h and the maximum residue level (MRL) of it was 0.1 ppm after 18 days of application (Sallam and Nabarawy, 2001). The residue of Profenofos in liver, kidney and muscle increased with increasing Profenofos level in diets and its concentration was ranged from 0.4 to 7 ppm (Ayyat et al., 2000). Profenofos (curacron) O-(4- bromo-z-chlorophenyl) o-ethyl Spropyl phosphorothioate is an organophosphorous insecticide widely used to control various white fly and mites on vegetable (Habiba et al., 1992). Farmers and their children may be exposed to higher doses of pesticides than other children of the same age group who live in areas where pesticides are not used. Families of farmers have increased risks of

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BIOINDICATOR ODONATES IN SOUTHEAST REGION OF NARMADA VALLEY, JABALPUR : A PRELIMINARY STUDY

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ABSTRACT
Biodiversity conservation and management are worldwide concern where determining the diversity levels of indicator groups of ecosystem should permit the prediction of other taxa to be present i.e., the importance and appropriateness of using invertebrate groups as indicator. Biodiversity protection and conservation is a national and international agenda and responsible for sustainable development of a region or a country and secondly Odonates are potential bio control agents of many invertebrates. Odonate assemblage from Narmada Valley in Jabalpur has been investigated. A total of 25 species of Odonata have been distributed in 7 families were sampled. In order Odonata, Libellulidae family is most dominating family, with 10 species followed by Coenagrionoidae with 7 species and others have fewer representatives. Mostly Odonates were aggregated due to habitat specific nature and random distribution indicates availability of resource utilization to survive but, in the urban forest area high anthropogenic disturbances were observed which creates high biotic pressure on forest. A detailed list of Odonates recorded from urban forest area is presented.

Key Words: *Odonata, Narmada Valley, biodiversity, bio control, urbanization*

INTRODUCTION

Biodiversity conservation and management are worldwide concern (Ramesh et al., 2010), where determining the diversity levels of indicator groups of ecosystem should permit the prediction of other taxa to be present i.e., the importance and appropriateness of using invertebrate groups as indicator (Oliver and Beattie, 1993; Pearson, 1994). With the exception of Antarctica, Odonata are widespread and abundant in all continents, although centres of species richness typically occur in tropical forests (Kalkman et al., 2008). In the invertebrate Odonates include insects known as dragonflies or damselflies and are always attract the human beings for their variety of colour, powerful flight and extraordinary sense of vision. Silsby (2001) described about 6000 species of dragonflies in all over the world. At present, the Odonata have about 5,680 species worldwide although the actual number of species may total 7,000 and the rate of new descriptions is currently approximately 200 Odonata species per decade (Kalkman et al., 2008) out of which Subramaniam (2009) revealed 470 species in 139 genera and 19 families exist in India that are valuable as indicators of aquatic and terrestrial ecosystem health (Brown, 1991) and also play a vital role as prey and predator to maintain the balance of tropic levels of food chain. They are also an important and widespread component of freshwater ecosystems, being top predators (Corbet, 1962). A recent study showed that in a global assessment about 10% of the world's dragonflies would probably be regarded as Threatened and 35% as Data Deficient (Clausnitzer et al., 2009). Narmada valley lies at the bank of the river Gaur and river Narmada in the way of Bargi and about 20 km southeast of Jabalpur. Odonata spend their larval life in aquatic habitats and use a wide range of terrestrial habitats as adults. Ubiquitous species prevail in disturbed or temporary waters, while pristine streams, seepage and swamp forests harbour a wealth of more vulnerable, often localised species. The Narmada Valley area is surrounded with a very large variety of trees, mini forest, vast grassland & small hill; these are the elements for architecting a preferred habitat or such species. Different ecological requirements

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ROLE OF TRADITIONAL KNOWLEDGE FOR BETTERMENT OF ENVIRONMENT AND MANKIND: SPECIAL REFERENCE OF RELIGIOUS BELIEFS AND PRACTICES OF FAUNA IN CHHINDWARA DISTRICT OF MADHYA PRADESH, INDIA

Dr. Neelima Bagde*[1] and Dr. Shampa Jain[2] ad Dr. Nagratna Ganveer[3]

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ABSTRACT

Religious beliefs and practices have long influenced human perceptions and uses of nature. Animals in particular play a prominent role in magico-religious practices and given the historical and cultural depth of these relationships, understanding human-faunal relations is often fundamental to the cause of meaningful wildlife conservation. This study investigates the domestic and wild harvested species used for spiritual and religious purposes by tribes and rural people of Chhindwara district. Faunal resources have played a wide range of roles in human life from the earliest days of recorded history. In addition to their utilitarian importance, animals have been recognized in religion, art, music and literature and other different cultural manifestations of mankind. The variety of interactions between humans and animals is the subject matter of ethnozoology. Ethnozoological studies can be a valuable asset to increase our understanding of the cultural, economic, social, and traditional roles of played by animals. In this context, they have a central role in conservation and management. This work provides a review on the main forms of interactions between humans and the fauna along history, and their ecological implications, and discusses the role of the ethnozoology in animal conservation. We identified a total of 30 species of animals (or animal derived products) used for magico-religious.

KEYWORDS: Religious, Conservation, Faunal resources, Traditional.

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Topic: **CHECKLIST OF MACROPHYTES IN KHANDARI LAKE JABALPUR (M.P.)**

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Extracellular Protease and DNase Activities in Clinical and Environmental Isolates of *Cryptococcus neoformans* Species Complex from Central India

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ABSTRACT

Enzymes are important not only for the growth and multiplication of the microorganism but also in the infection, penetration of the host tissue and encountering host defense mechanisms. This study aims to investigate extracellular protease and DNase activity in clinical (20) and 120 environmental isolates of *C. neoformans* species complex collected from different localities of central India. DNase test agar containing toluidine blue and Yeast Carbon Base (YCB) agar medium supplemented with 0.1% BSA + 0.01% polypeptone was employed for the screening of DNase and protease production respectively. DNase and protease production was detected by the appearance of clear zones around the colonies. On the basis of enzymatic activity and their Pz values, high protease production (Pz≤0.6) was observed by 14 (11.6 %) environmental and 4 (11.6 %) clinical strains on 5th day, whereas 35 (29.16 %) environmental and 8 (40 %) clinical strains were screened on 8th day of incubation. Similarly 13 (10.83%) environmental and 3 (15 %) clinical strains on the 5th day, however 32 (26.66%) environmental and 8 (40 %) clinical strains on the 8th day of incubation were found to be high DNase producing strains with low Pz value (Pz≤0.6). In the case of protease activity, no significant difference was observed whereas a significant difference has shown by clinical *C. neoformans* and *C. gattii* strains on the 5th day of DNase production ($p < .001$). Extracellular enzymes play a vital role in the pathogenicity and virulence of *C. neoformans* species complex, therefore, enzymes are considered as worthy targets for developing therapeutics.

Keywords: *Cryptococcus neoformans* species complex, Extracellular enzymes, DNase, protease, virulence, Pz value

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INTRODUCTION:

Opportunistic pathogens *Cryptococcus neoformans* and *Cryptococcus gattii* are the members of *Cryptococcus neoformans* species complex[1]. *C. neoformans* has been classified into two varieties and three serotypes i.e. serotype A for *Cryptococcus. neoformans* var. *grubii,* serotype D for *C. neoformans* var. *neoformans* and serotype AD for the hybrids of serotype A and D. *C. gattii* was previously known as *C. neoformans* var. *gattii* but currently it is considered as phylogenetically related but distinct species and contains serotype B and C[2-5].

Cryptococcus neoformans and *Cryptococcus gattii* both species were reported for the production of a panoply of extracellular enzymes[6] like proteases [7], urease [8-9], phenoloxidase, phospholipases[10] and DNase[11].

C. neoformans infection commonly acquires from the environment [12], the mechanism includes tissue invasion and is disseminated to other organs via the bloodstream from the lung [13-15]. Studies of experimental infection in rats suggested *C. neoformans* produces tissue disrupting substances such as proteolytic enzymes through which it can penetrate the lung parenchyma and histopathological studies suggested *in-vivo* protease production which degrades collagen fibrils in infected tissues [16].

Cryptococcal proteases have been associated with the virulence and are responsible for the destroying host tissues and for digesting several important host proteins such as collagen, elastin, fibrin, fibrinogen, immunoglobulins and complement factors [17, 7, 10].

MATERIAL AND METHODS:

Clinical and environmental isolates:

In the present investigation, environmental and clinical samples were collected from various sources. Environmental sources include decaying woody debris inside the living tree

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Pigeon Excreta: A Potential Source of *Cryptococcus Neoformans* and their Antifungal Susceptibility Profile

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ABSTRACT

Globally the pigeon droppings are a known ecologic niche for cosmopolitan pathogenic yeast Cryptococcus neoformans, an etiological agent of deadly disease cryptococcosis. In this prospective study between 2015- 2017, we analyzed the isolation of C. neoformans strains from a total of 305 pigeon excreta samples of caged pigeons with a pH of 6-8, from different sites of Central India. NCCLS broth microdilution methodology was employed on the isolated strains against amphotericin B, fluconazole, itraconazole, ketoconazole, and voriconazole. C. neoformans were found positive from fifty-five dry guano feces. Maximum positive samples found for the pathogens were from caged pigeon excreta collected from the 12 different sites in city Jabalpur 23 (46 %), 9 (18 %) from four sites katni, followed by 3 sites from each city Betul 8 (16 %), Satna 6 (12%) and Rewa 4 (.08 %). The highest frequency of C. neoformans was recorded from site 2 (60%), followed by site 24 (37.5%), site 17 (27.27%), whereas site 3, 6, 10, 15 and 19 found negative for pathogenic yeast. the present study of antifungal susceptibility profile for C. neoformans revealed resistance against ketoconazole (25.5%) and fluconazole (8.5 %). The highest susceptibility was observed for amphotericin B (100 %) followed by voriconazole (97.9 %) and itraconazole (78.7%) No resistance was found for polyene drug amphotericin B. Fluconazole (46.8 %) and ketoconazole (36.2%). This data of prevalence and colonization of this pathogen suggests that the dry excreta provides a more favorable environment for growth inside the cages and is more concerned with health hazards of the humans in proximity and further comprehensive study is required to reinforce the antifungal spectrum for the prudent therapy of cryptococcosis.

KEYWORDS*: Pigeon droppings, Cryptococcosis, Cryptococcus neoformans, Central India, NCCLS, antifungal susceptibility*

INTRODUCTION

Cryptococcosis is a major life-threatening acute, sub-acute or chronic systemic mycosis caused by encapsulated opportunistic yeasts belonging to genus Cryptococcus. *Cryptococcus* is a cosmopolitan basidiomycetes opportunistic fungal pathogen prevalent ubiquitously in the environment, however only very few are usually pathogenic to men and animal hosts. Majority of infections are caused by *C. neoformans* and *C. gattii* species complex while other *Cryptococcus* species are rarely been reported to cause disease till date. *C. neoformans* is isolated predominantly from avian or areas contaminated with avian feces, therefore, pigeon droppings are a known ecologic niche for this pathogen [1].

Although the occurrence of *C. neoformans* was also studied from domestic and wild animals include macaw, swan, parakeet, Guenon monkey, fox, potoroo, and sheep [1]. the droppings of exotic and migratory birds like Munia birds [2], Bats [3], Chickens [4-5], Canaries [6], Parrots [7], Beccari's crowned pigeon [8], Barlett's bleeding heart pigeon [9], a macaw [10], a thick-billed parrot [11] and Moluccan Cockatoo [12].

In Central India for the first time the natural occurrence of *Cryptococcus neoformans* var. *neoformans* was reported in the soil contaminated with pigeon excreta in Jabalpur [13] and in Betul [14]. Out of 29 samples examined, 9 (31%) proved to be positive for *C. neoformans* from which eight were collected from pigeon houses, which were located inside the residential places.

15 clinical cases of avian cryptococcosis (Congo African Grey parrot, African Grey parrot, 2 case of Eclectus parrot, King parrot, Sulphur Crested Cockatoo, 3 cases of Long-billed

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Botany and Zoology

Evaluation of Extracellular Proteinase and Phospholipase Activities of Indian Clinical Strains of *Candida Albicans* and Non-*Albicans* and Their Correlation with the Source of Isolation and Minimum Inhibitory Concentration Values of Antifungal Drugs

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Abstract **Original Research Article**

The present study was aimed to evaluate some of the virulence traits, *viz*., extracellular proteinase and phospholipase activities, of *Candida albicans* (n=130) and non-*albicans Candida* (n=60), such as *C. tropicalis, C. parapsilosis, C. glabrata, C. guilliermondii*, and *C. krusei*. The isolates of *Candida* species that were investigated in the current work were obtained from diverse clinical sources in Jabalpur, Madhya Pradesh, India. The correlation between the clinical sources of isolation and minimum inhibitory concentration of antifungal drugs was also determined. A screening for the production of extracellular proteinase and phospholipase enzymes was done using the Yeast Carbon Base–Bovine Serum Albumin medium and the Egg Yolk Plate method, respectively. The Minimal Inhibitory Concentration against the tested antifungal drugs was determined by the M–27A CLSI/NCCLS macrodilution method. Of the 190 *Candida* isolates, 150 (80%) were positive for extracellular proteinase and 141 (74.2%) for phospholipase secretion. A non-significant difference was observed for extracellular proteinase and phospholipase activities among *C. albicans* and non-*albicans* as determined by ANOVA ($p > 0.05$). The comparison of individual extracellular proteinase and phospholipase activities among the sources studied also demonstrated non-significant difference and almost comparable results using Dunnett's t-test and Tukey's HSD Post Hoc test for the secretion of both the enzymes. A significant positive correlation between enzyme secretion and MIC of antifungal was demonstrated ($p < 0.05$), which suggested some role of extracellular enzymes among the *Candida* spp. in increasing the resistance against commonly used antifungal drugs.

Keywords: *Candida albicans*, non-*albicans*, proteinase, phospholipase, virulence factors, minimum inhibitory concentration.

INTRODUCTION

Candida albicans and non-albicans *Candida* species usually thrive as normal commensal flora in the human oral mucosa [1]. However, in immune compromised patients, the fungi can become opportunistic pathogens of the oral mucosa [2]. Nawange *et al.*, previously reported a naturally acquired disseminated dual infection that was caused by *C. famata* and *C. catenulata* in a group of albino rats [3]. The transformation from a harmless to a virulent pathogen under the conditions of a dysfunctional host defense system can be attributed to an extensive repertoire of selectively expressed virulence determinants, including the ability of the yeast to produce extracellular hydrolytic enzymes, especially, extracellular proteinases and phospholipases that play important roles in adherence, penetration, and subsequent invasion of the infected tissues [3-6]. Hydrolytic enzymes, such as extracellular proteinases and phospholipases, have been regarded as the major determinants of pathogenicity of *C. albicans* [7-10].

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Phytochemical screening of honey tree (Medhuca indica) and traditional uses in Eastern Madhya Prades

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Abstract

The traditional uses of the honey tree medhuca indica (Gmel.) family Sapotaceae is presented in this communication with its vernacular name, taxonomy uses of parts, method of preparation, administration and ethnomedicinal uses. Analysis of phytoconstituents of this plant viz. carbohydrate alkaloid, saponin, Flvonoids and tanine have also been done and reported. Plant are the source of many Bio-active compounds. Primary metabolities are directly involved in fundamental plant physiology processes are rasely considered to be major determination of host plant resistance. The phytochemical screening of *Madhuca indica* was done by using various plant parts and they were respectively reported to have the presence of secondary metabolities like alkaloids and flavinoids.

Keywords: Phytochemical screening, traditional uses, flavonoids, alkaloid.

The universal role of plants in the treatment of disease is exemplified by their employment in all the major system of medicine, irrespective of the underlying philosophical premise (Evens and Trease 1987). Plants are having a great importance to pharmaceutical industry, because these are rich source of drugs and a vast reservoir of chemical diversity for screening programs aimed at new drug discovery. Most of the drugs which are mention in the Indian medicinal system are from plant source. (Hoffman and Leaders, 1996). Screening programs which are based on the part of natural plant have achieved great success in identifying very useful chemical constituents.

The world health organization is now actively focusing his attention towards the developing countries to encourage them to use herbal medicine, which they have been traditionally, used for centuries. They have identified 3000 plants from forest of India (Agrawal and Paridhavi 2009). Herbal medicine can be defined as those products which are simply derived from the any part of plant (Ansari, 2007). The most advantage of the herbal medicine is that they contain a wide variety of different component (Londis *et al.*, 1997).

The large number of ethnomedicinal plants are used by local health care by tribals, that help to increase in tradition knowledge. The screening has been done to trace the presence or absence of some important chemical constituents viz. carbohydrate, saponin Lipid, Tannin, flavonoid, and alkaloid content of this plant under study.

The knowledge of traditional medicine put the light on the discovery of new and potent medicine. The common difficulty that researchers and worker face with medicinal plant is about the purity of authentic information on the identity of the plant, its habit and the condition required for its collection and than its utilization as a medicinal plant (Chopra *et al.*, 2006). Another important things about medicinal plant is prerequisites information for safety and efficacy must be know for address quality (Miller, 2005).

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APPLICATION OF NONLINEAR CONTRACTION CONDITION FOR SOLUTION OF FIRST-ORDER DIFFERENTIAL SYSTEMS WITH GENERAL NONLOCAL CONDITIONS

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Abstract This paper concerns the existence of solutions to initial-value problems for nonlinear first-order differential systems with nonlocal conditions of functional type. The fixed point principles by Perov, Schauder and Leray-Schauder are applied to a nonlinear integral operator split into two operators, one of Fredholm type and the other of Volterra type. The novelty in this article is combining this approach with the technique that uses convergent to zero matrices and vector norms. We also give some examples in support of our results.

MSC: 34A34, 34A12, 45G10
Keywords: Nonlinear differential system; nonlocal initial condition; fixed point; vector norm; matrix convergent to zero

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Ecological niche of *Cryptococcus neoformans* species complex from Betul city of Madhya Pradesh

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Abstract

Globally the risk of outbreaks has been increasing with the expansion of environmental *Cryptococcus neoformans* and *Cryptococcus gattii* pathogens. In this prospective study we analyzed the isolation of *C. neoformans* - *C. gattii* strains from a total of 500 tree samples and *C. neoformans* from 194 pigeon samples collected from different sites of Betul and Bhopal city of Madhya Pradesh (India). Selective isolation of *C. neoformans* sp. complex was done by swabbing and Direct Plating Method. As per the data, out of total 500 tree samples 30 were found positive for *Cryptococcus neoformans* and 36 samples positive for *C. gattii*. Highest cfu was obtained from *Tamarindus indica* ($19x10^4$). Total 35 pigeon samples were found positive for *C. neoformans* and the highest frequency was observed from the pigeon sample collected from Bablu Talab Kothin Bazar (12.08%), Betul city of Madhya Pradesh (India). This study suggested the living tree trunk hollows and pigeon excreta as a possible ecologic niche for *C. neoformans* species complex, hence it gains more attention in the environmental occurrence and role in cryptococcosis.

Keywords: *C. neoformans* species complex, living tree trunk hollows, pigeon excreta

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Introduction

Cryptococcosis is caused by both the varieties of *C.neoformans* species complex, *i.e., Cryptococcus neoformans* and *Cryptococcus gattii* that affects lungs and central nervous system predominantly and is the commonest fungal meningitis (Meyer *et al.,* 2009).

Over the past 2 decades, the case of deadly disease has increased worldwide dramatically in the number of immunocompromised individuals with HIV infection, cancer

Amplified Fragment Length Polymorphism (AFLP) analysis in *Cyamopsis* spp. for Genetic Diversity Study

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Abstract

The aim of present work is to study genetic diversity and phylogenetic relationship among 13 guar varieties from different germplasm conservation centers of India. A total of 64 primer combinations were tested and 24 primer combinations producing best DNA fingerprints were selected for final analysis. The AFLP marker gives keen amplification with 1,671 polymorphic bands and 62 unique bands ranging from 55 bp to 350 bp. Maximum numbers of unique bands were produced with E-ACT/M-CAG primer combination.

This analysis allows determining association with an undefined feature and helps in identification of these genotypes. The phylogenetic relationship was explained by a dendrogram generated with UPGMA method. These guar genotypes may be used to develop new varieties with significant improvement in quality and quantity of gum.

Keywords: Genetic diversity, AFLP, Dendrogram, Molecular markers, *Cyamopsis tetragonoloba.*

Introduction

Guar (*Cyamopsis tetragonoloba* [L.] Taub) is an annual, drought-tolerant plant of leguminosae family. It is one of the main crops of North Western India, South Eastern Pakistan and Oklahoma and Texas states of USA. Guar was traditionally used as a feed for livestock and poultry but now has become an industrially important crop due to the commercial applications of the gum present in its seeds.[8] Despite being a very important crop, it has not sought much attention of the molecular biologists.[2,18]

Recently there has been a considerable increase in the demand for guar gum due to its increased use in drilling of oil wells.[14] In order to meet this increasing demand, improved varieties of guar are required. For genetic improvement of guar. An overview of its genetic diversity is essential. Guar accessions have been conventionally characterized based on morphological traits.[4,13]

However morphological and biochemical characteristics are not sufficient to assess genetic diversity effectively as these are scarce and also vary with environmental fluctuations. Previous reports have shown that even when no morphological differences are present, the possibility of finding genetic difference is not ruled out.

The DNA segments which act as landmarks in genome analysis, prove to be very useful in diversity study and plant breeding. These segments, also known as molecular markers, are stable and can be detected in a tissue at any growth or developmental stage. For an effective and reliable germplasm characterization, a large number of molecular markers are required.

Several such markers like RFLP, RAPD, AFLP, SCAR, STS, SSR, SNP etc. have been described.[1,22] Genetic diversity in guar has been studied using RAPD markers[9,17], ISSR markers[9] and SSR markers.[10] However, the use of AFLP (amplified fragment length polymorphism) markers might prove to be a better option for such studies as it combines the reliability of RFLP and ease of RAPD markers.[20] This technique has also been used for the construction of genetic linkage map in various plants such as maize, alfalfa etc.[6,21] A genetic linkage map would further enhance research in this crop where genetic progress is very slow. The present study was carried out to optimize the AFLP primer combinations and use these combinations to understand genetic diversity in 13 accessions of *Cyamopsis* assisted with factor based analysis.

Material and Methods

Plant material and DNA extraction: The varieties used in the present study (Table 1) were obtained from Central Arid Zone Research Institute (CAZRI), Jodhpur, National Bureau of Plant Genetic Resources (NBPGR), New Delhi and Chaudhary Charan Singh Haryana Agricultural University (CCSHAU), Hisar. Genomic DNA was isolated from young leaves using CTAB method as described by Khanuja et al[7] with some modifications and 500ng of DNA of each variety was used for AFLP analysis.

AFLP analysis: Genomic DNA was digested with two restriction endonucleases *Eco*RI and *Mse*I (NEB). AFLP procedure was followed according to the Applied Biosystems protocol. Restriction and ligation reactions were carried out in a single reaction tube simultaneously.[20] Eight fluorescent labeled *Eco*RI primers and eight unlabeled *Mse*I primers were used to make 64 combinations. The *Eco*RI primers contained three selective nucleotides with the sequence 5'-[Dye- Primer-Axx]-3' while the *Mse*I primers had the selective nucleotides starting with C, that is, 5'-[Primer-Cxx]-3'.

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An in vitro study of cytotoxicity of organophosphate insecticides (Imidacloprid, Profenofos, Dichlorvos) and natural products (Neem oil and Dashparni ark) on human peripheral lymphocytes by MTT and Trypan blue assay

Research Article

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Abstract

Human population of India is increasing very fast. Everybody needs food to survive. Agricultural products must be boosted by adding adequate fertilisers and using appropriate insecticides. Organophosphates are one of the most frequently used insecticides. Their overuse leads to the contamination by agricultural runoff. The insecticides may enter drinking water as well. Since organophosphates are acetylcholinesterase inhibitors, they can be dangerous for human health. Hence, a toxicity study by MTT and Trypan Blue Assay of three common insecticides (Imidacloprid, Profenofos, Dichlorvos) and two natural products (*Dashparnik ark* and *Neem* oil) on lymphocytes was taken up. It was found that at 4 hours of incubation at 1mM Imidacloprid showed the greatest drop in viability followed by Dichlorvos and the least harm was caused by Profenofos. For 18 hours of incubation, the same trend was observed, but the decrease and increase were more pronounced. In the case of Profenofos and Dichlorvos the viability percent rises above that of the control. It was probably due to the defense mechanism involving the P450 detoxification pathway of the cells. The damage to the cells was of lesser magnitude when organic insecticides were used. *Neem* nano-drop emulsion showed a significant fall in viability at 2mg/ml. *Dashparnik ark* produced very little damage, but at higher concentration it boosted the viability. Apparently, the extract of leaves fermented in cow urine and cow dung was less damaging than that of other insecticides. Thus, organic insecticides are safer to use because they are ecofriendly and do not harm non-target organisms.

Keywords: Cytotoxicity, Lymphocytes, Insecticides, *Dashparni ark, Neem*.

Introduction

It is well known that the global population is continuously increasing. The global population was 7 billion in 2010 but is expected to reach 9 billion in 2045.(1) The population increase is even steeper in India. Indian population is currently 1.4 billion and is projected to exceed 1.5 billion in 2050.(2) To feed a continuously increasing population, an increase in food grain and crop production is necessary. Intense efforts have to be made to increase production of food grains seasonally. The agricultural sector contributes a major share (22.19%) to the gross value added (GVA) of the GDP of the country (46.4 lakh crore). So, an increase in agricultural production will also give a boost to the economy of our country.

Insecticides have been used for a long time to reduce crop losses, and many types of insecticides have been used in the agricultural industry by almost all types of farmers. The indiscriminate and frequent use of insecticides has resulted in soil and water pollution. This is mainly due to agricultural runoff. If humans are overexposed to these chemicals, they suffer from several ill effects, primarily because most of the insecticides used are organophosphates, which are acetylcholinesterase inhibitors. As such, they hinder nerve impulse transmission, and the target has to suffer the consequences. Therefore, it was thought beneficial to study their toxicity on human peripheral blood lymphocytes in vitro. Some organic insecticides are reportedly less toxic, so in this study, the cytotoxicity of the chemical insecticides has been compared with that of *Neem* oil nano-particle emulsion and *Dashparni Ark*.

Profenofos

Organophosphates are the most widely used group of pesticides globally. Profenofos is a very

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