ISSN No. (Online): 2319-5221

A Comparative Study of English for Specific Purposes (ESP) and English as a Second Language (ESL) Programs for hotel management students

Gopinadh Upadhyay
Department of English, University of Rajasthan, Jawaharlal Nehru

Corresponding author: Gopinadh Upadhyay
Received 05 January 2018; Accepted 27 February 2018;
Published by Research Trend, Website: www.rsearchtrend.net

ABSTRACT: English for Specific Purposes (ESP) Programs are designed for students who want to improve their English in a certain professional field of study currently taught at university. Different from pre-academic and university ESL programs, which teach basic academic skills for all fields of study, ESP Programs teach the English needed in specific academic subjects, such as in hotel management or engineering. For example, a student who hopes to study engineering in the future would take an ESP class entitled "English for Engineering"; and a hotel management student would choose the ESP class "English for hotel management." This paper aims to study the role of English as a language provide for Specific Purposes (ESP) and English as a Second Language (ESL) Programs for hotel management students

Key Words: English for Specific Purposes (ESP), ESL, Strategies, Learning Centered Approach

1. INTRODUCTION

English language has acquired a very important and dignified place not only in our country but across the globe. Although it is not a global language, yet communication between two countries is hardly possible without the assistance in India, as could was felt more than a century ago much before India got freedom. Raja Ram Mohan Roy advocated the use of English like most of the developments in the activities of human life, ESP was also developed accidentally. Rather, as developments came according to the need of people in different parts of the world and the most striking factor about its need is that it was not felt in the same way at the same time across the world. Tom Hutchinson and Alan Waters in their English for Specific Purposes: A Learning Centered Approach (1987) write

As with most developments in human activity, ESP was not a planned and systematic movement but rather a phenomenon that grew out of a number of converging trends. These trends have operated in a variety of ways around the world [1]

"ESP is a major activity around the world today. It is an enterprise involving education, training and practice, and drawing upon three major realms of knowledge: language, pedagogy, and the students' participation specialist areas of interest." The full name of "ESP" is generally given as "English for Specific Purposes", and this would imply that what is specific and appropriate in one part of the globe may well not be elsewhere. Thus, it is impossible to produce a universally applicable definition for ESP [2]

English for specific purposes (ESP) not to be confused with specialized English, it is a sphere of teaching English language, including Business English, Technical English, Scientific English, English for medical professionals, English for lawyers, English for economy, English for Art Purposes, etc. Academic English or ESP or English for public administration, scientists and civil servants refers who are going to use it in their professional activities. ESP can be also considered as an area of language for specific purposes. Students have more or less [illegible] and are [illegible] knowledge outside syllabus. Some thing happens in case of English Learning also. Students sometimes more or learning amongst on the questions provided by [illegible] is a basic and grammar exercises done in the class [3] The classes which is thought that's more with high [illegible] but what it needs to using the knowledge they are studying today. They have opportunities to [illegible] in their work place. My paper deals with same issue and also with the importance of English for specific Purposes in general scenario particularly in the field of hotel management students.

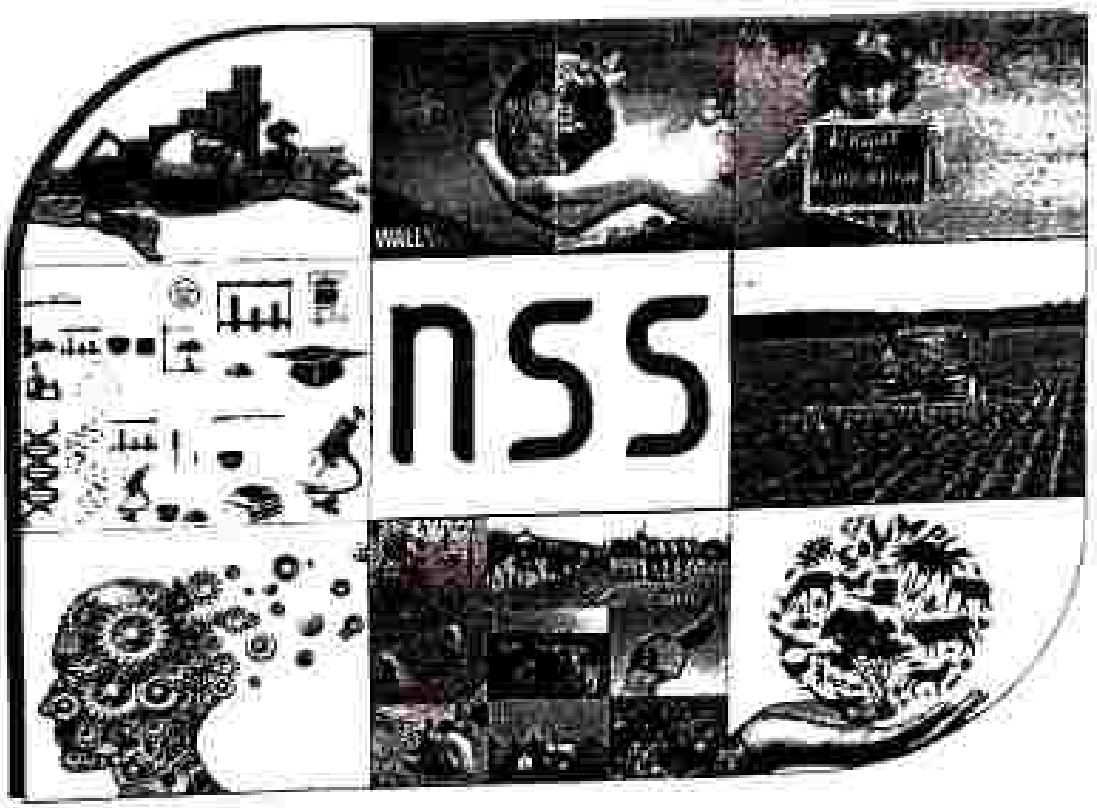
October To December 2017
E-Journal, Volume IV, Issue XX
U.G.C. Journal no. 64728

RNI No. - MPHIN/2013/60638
ISSN 2320-8767, E-ISSN 2394-3793
Impact Factor - 4.710 (2016)

Naveen Shodh Sansar

(An International Multidisciplinary Refereed Journal)

(U.G.C. Approved Journal)



नवीन शोध संसार

Editor - Ashish Narayan Sharma

Office Add. "Shree Shyam Bhawan", 795, Vikas Nagar Extansion 14/2, NEEMUCH (M.P.) 458441, (INDIA)
Mob. 09617239102, Email : nssresearchjournal@gmail.com, Website www.nssresearchjournal.com

Multi-disciplinary International Journal

Certificate of Paper Publication

Remarking

E-ISSN 2455-0817
P-ISSN 2394-0344

SJIF-6.11
GIF-0.543
IIJIF-6.134

RNI
UPBIL29147/67988
Indexed
Google

Remarking An Analisation

This is to certify that the paper titled .... Communicative Skills for Engineering students in National Captial Region ....

Author : Omprakash Upadhyay
Designation : Lecturer
Dept. : English
College : Kamla College, Dholpur, Rajasthan, India

Has been published in our Peer Reviewed UGC approved International Journal vol. ...3..... issue ..... 11 ..... month Feb(Part-2) year 2019.
The mentioned paper is measured upto the required.

Dr Rajeev Misra
(Editor/Secretary)

Dr. Asha Tripathi
(Vice-President)

Social Research Foundation
Non Governmental Organisation
(28/70, Block-D, West Nagar, Raipur - 2080 01)

Pravesh Shodh Sansar

ISSN No. - 2455 - 0736
E- ISSN NO. - 2454 - 2199
Impact Factor - 4.710
UGC Journal no. - 48718

Add:- 795,Shayam Bhawan, Vikas Nagar Extension 1&2 Jhansi (U.P.) 284003
Mob:- 09617239102 Email id :- praveshshodhsansar@gmail.com Website :- www.praveshshodhsansar.com

TO Whom It May Concern

It is certified that **Dr. Omprakash Upadhyay, Lecturer, Kamla College, Dholpur (Raj.) [redacted]**. We are glad to inform that **Dr. Omprakash Upadhyay** published his research paper in **Pravesh Shodh Sansar** (an international multidisciplinary refereed/peer review journal) in June to September 2017 E-journal, Volume III, Issue XIX on page number 455 with title – "**English for specific purposes : course design for engineering students in National Capital Region**"

Date: - 04/Oct./2017

Editor

Ashish Narayan Sharma

Multi-Disciplinary International Journal

Certificate of Paper Publication

Remarking

E-ISSN 2455-0817
P-ISSN 2394-0344
SJIF-6.11
GIF-0.543
IIJIF-6.134
RNI UPBIL/2018/67980
Indexed Google

Remarking An Analisation

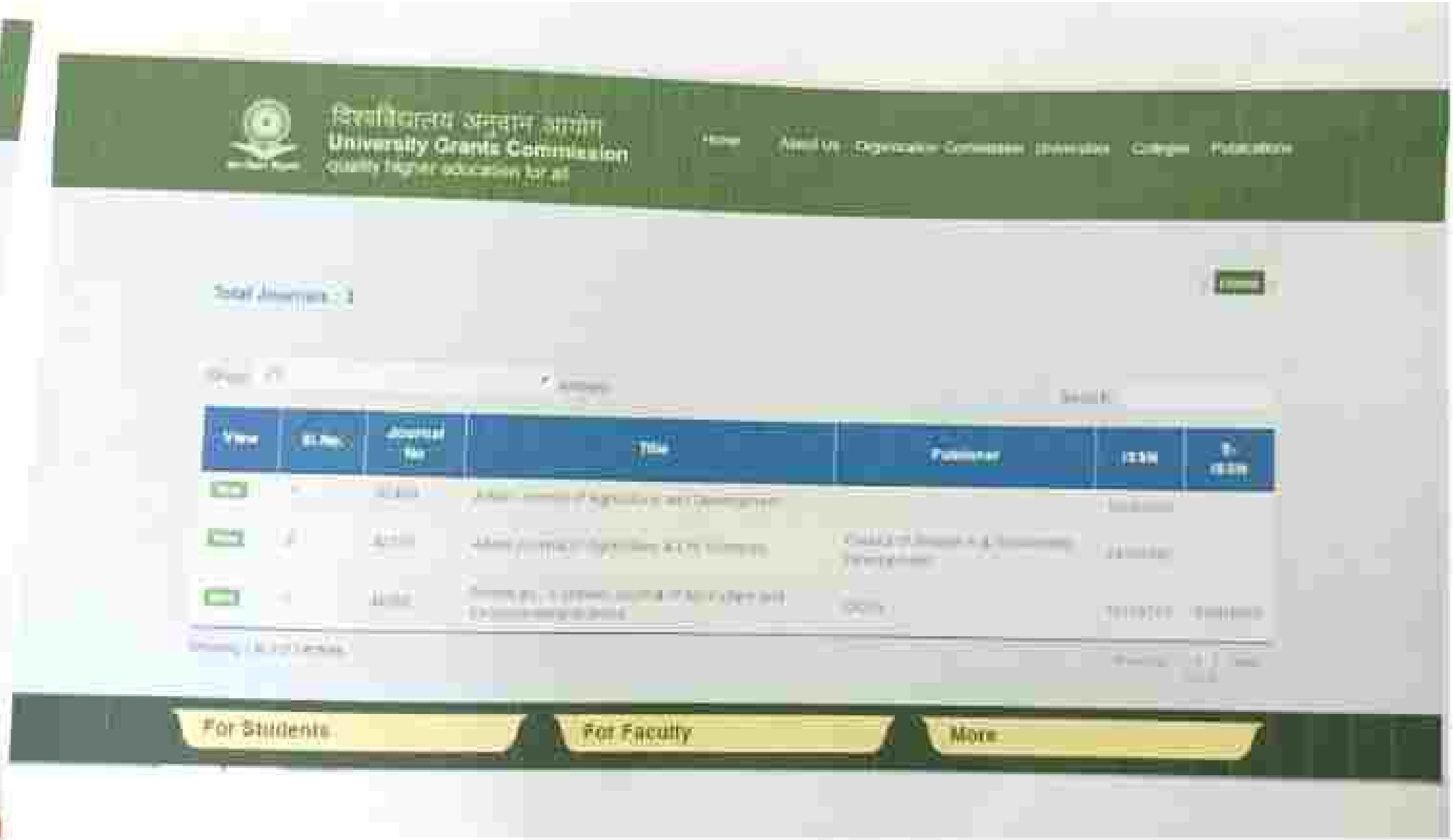
This is to certify that the paper titled .... Communicative Skills for Engineering students in National Captial Region ....

Author : Omprakash Upadhyay
Designation : Lecturer
Dept. : English
College : Kamla College, Dholpur, Rajasthan, India

Has been published in our Peer Reviewed UGC approved International Journal vol. 3 issue 11 month Feb(Part-2) year 2019.
The mentioned paper is measured upto the required.

Dr Rajeev Misra
(Editor/Secretary)

Dr. Asha Tripathi
(Vice-President)



An initiative on UGC - List of Journals

The UGC List of Journals is a dynamic list which is revised periodically. Initially the list contained only journals included in Web of Science, and Indian Citation Index. The list was expanded to include recommendations from the academic community. The UGC portal was opened twice in 2017 for universities to upload their recommendations based on drawing criteria available on http://www.ugc.ac.in/journallist/Guidelines.pdf. The UGC-approved List of Journals is considered for recruitment, promotion and career advancement not only in universities and colleges but also other institutions of higher education in India. As such, it is the responsibility of UGC to curate its list of approved journals and to ensure that it contains only high-quality journals.

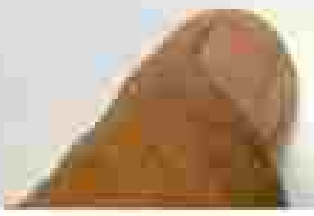
To this end, the Standing Committee on Notification on Journals removed many non-existent/questionable journals from the list between 20th May 2017 and 14th September 2017. This is an ongoing process and since then the Committee has examined all the journals recommended by universities and also those listed in the list, which were re-evaluated and re-scored on filtering criteria defined by the Standing Committee based on careful scrutiny and analysis. 4,305 journals were removed from the current UGC-Approved List of Journals on 2nd May, 2018 because of poor quality/incorrect or insufficient information/false claims.

The Standing Committee reiterates that removal/non-inclusion of a journal does not necessarily indicate that it is of poor quality, but it may also be due to non-availability of information such as date of editorial board, indexing information, year of its commencement, frequency and regularity of its publication schedule, etc. It may be noted that a dedicated web site for journals is one of the primary criteria for inclusion of journals. The websites should provide full postal addresses, e-mail addresses of chief editor and editors, and at least some of these addresses ought to be verifiable official addresses. Some of the established journals recommended by universities that did not have dedicated websites, or websites that have not been updated, might have been dropped from the approved list as of now. However, they may be considered for re-inclusion once they fulfil these basic criteria and are re-recommended by universities.

The UGC's Standing Committee on Notification on Journals has also decided that the recommendation portal will be opened once every year for universities to recommend journals. However, from this year onwards, every recommendation submitted by the universities will be reviewed under the supervision of Standing Committee on Notification of Journals to ascertain that only good-quality journals with correct publication details are included in the UGC approved List.

The UGC would also like to clarify that 4,305 journals which have been removed on 2nd May, 2018 were UGC-approved journals till that date and, as such, articles published/accepted in them prior to 2nd May 2018 by applicants for recruitment/promotion may be considered and given points accordingly by universities.

The academic community will appreciate that in its endeavour to curate its list of approved journals, UGC will enrich it with high quality, peer reviewed journals. Such a dynamic list is to the benefit of all.



ISSN : 2456-1363

International Journal of Scientific Research & Growth

A multidisciplinary journal for empowering the research

Online Education in India: Future Prospective benefits and Challenges

Naveen Kumar Singh & Savita Chauhan & Shivanshu Bhadhoriya & K.K.Upadhyay

Ideal IITM Gwalior M.P. India
KPS Science Academy, Ramkhwapuram TCF Gate Tekanpur Gwalior M.P. India
Guest Faculty, Govt.P.G. College Lahar Bhind M.P. India
Department of Chemistry, Kamla P. G .College, Dholpur (Raj.)-India
E-mail –esavi86@gmail.com

Abstract

Online education has gained much popularity in the recent time. Online learning has been reported to improve the teaching methods, which many students have considered as a positive influence. Many teachers have gone the extra mile to make their classes more interactive. While some of them have to learn how to handle modern online resources.

Key words:-Online education, e-education and online education benefits.

Introduction

Education is a very important factor in the economic development of any country. India since the early days of independence has always focused on improving the literacy rate in our country. Even today the government runs many programs to promote Primary and Higher Education in India. Education in India means the process of teaching, learning, and training of human capital in schools and colleges. This improves and increases knowledge and results in skill development hence enhancing the quality of the human capital. Our government has always valued the importance of education in India and this is reflected in our economic policies.

Online education allows for learning something beyond the norm. A learner has access to unlimited topics and global experts in niche subjects – something otherwise not affordable or imaginable for many. Online programs allow people of a wide age group to learn at their own pace, without inhibitions, and without compromising on their other responsibilities.

International Journal of Theoretical & Applied Sciences, 12(1): 01-03(2020)

ISSN No. (Print): 0975-1718
ISSN No. (Online): 2249-3247

Physico-Chemical Study of Soil in Dholpur City

K.K. Upadhyay[1], Ramdeen Sharma[2] and M.K. Singh[3] and Ashok Chandra Pandey[1]

[1]Department of Chemistry, Kanoria P.G. College, Jaipur, 302020 (Rajasthan), India.
[2]Department of Chemistry, Govt. P.G. College Dholpur 328001 (Rajasthan), India.
[3]Department of Chemistry, Govt. Madhav Science College Ujjain (Madhya) Pradesh, India

(Corresponding author: K.K. Upadhyay)
(Received 24 January, 2020, accepted 19 March, 2020)
(Published by Research Trend, Website: www.researchtrend.net)

ABSTRACT: The soil contamination is increasing at a very rapid rate due to influx of pollutants in the agriculture ecosystems. This has changed the physical, chemical and nutritive value of the soil and has caused damage not only to the productivity of soil but has also caused damage to the human health as pollutants get accumulated in the trophic levels. The physical and chemical properties of the soil and the impact of the pollutants were investigated in Gwalior soil ecosystem.

Keywords: Soil, physical properties, chemical properties, dholpur.

I. INTRODUCTION

Soil is a basic resource in the agricultural production system and monitoring its fertility is an significant objective in the sustainable development of agro-ecosystems [1]. The agriculture land is also agreed as fertility which is fundamental and essential for production of different crops and a big source of population is associated with this source. Moreover, the productivity of these ecosystems depends on the quality of the soil and different management practiced [2-3]. Micronutrients such as Copper, Iron, Manganese, and Zinc are essential metals for plant growth and yield. However, pollutants which are not essential for plant growth get accumulated in plants from existing soils cause negative impacts. The availability of ions to plants is dependent on the concentration of pollutants in soil solution and many factors like soil pH, organic carbon, electrical conductivity etc., influence their accumulation in soil solution. The most important factors affecting metal availability are soil, industrial production, mining, agriculture and transportation release large amount of pollutants into the soil ecosystems and ultimately to different food chains [4]. The accumulation of pollutants in different food chains is of concern due to the probability of food contamination through the soil ecosystem. It is argued that pollutants like lead and mercury are not necessary for plant growth, they are accumulated by plants in toxic forms [5-6]. An increasing concern for the sustainability of soil quality has led to the development of a set of management practices that reduce the potentially negative impact of agricultural activities [7]. Keeping the above facts into consideration an analysis was carried out to know the status of different soils in Dholpur.

II. STUDY SITES

Sampling sites: Soil samples were collected from four different areas which are as follows:

1. Farm soil sample
2. Barren land soil sample
3. Road side soil sample
4. Garden soil

III. METHODS AND MATERIALS

Experimental

Parameter	Method
pH	pH strip method
Conductivity	Electrical conductivity meter
Texture	Feel method
Alkalinity	Neutralization method
Hardness	Complex method
DO	Winkler method
TDS	Evaporation method
Chloride ion	Mohr's method
Sulphate	Gravimetric method

ISSN : 2456-1363

International Journal of Scientific Research & Growth

A multidisciplinary journal for empowering the research

Consumer and Consumerism in Society welfare

Naveen Kumar Singh & Sovita Chauhan & Shivantika Bhadhoriya & K.K.Upadhyay

Ideal BTM Gwalior M.P. India
KPS Science Academy, Kandhwapuram TCP Gate Tekanpur Gwalior M.P. India
Guest Faculty, Govt.P.G. College Lahar Bhind M.P. India
Department of Chemistry, Kamla P.G. College, Dholpur (Raj.)-328001
E-mail—csavita6@gmail.com

Abstract

Today consumer is called the king of market. He is at the centre stage of all market activities. It is constant endeavor of producers that the production of product must conform to the needs of consumer. In addition to the satisfaction of consumer, it also the endeavor of producers that their sale should be maximum. The aim of this paper is to enlighten the reader about the complication of this system without going into technicalities.

Keywords:-Consumer, Consumerism, business and society

Introduction

Consumerism is a social and economic order that encourages the acquisition of goods and services in ever-increasing amounts. With the industrial revolution, but particularly in the 20th century, mass production led to overproduction—the supply of goods would grow beyond consumer demand, and so manufacturers turned to planned obsolescence and advertising to manipulate consumer spending. In 1899, a book on consumerism published by Thorstein Veblen, called The Theory of the Leisure Class, examined the widespread values and economic institutions emerging along with the widespread "leisure class" at the beginning of the 20th century.[1] In it, Veblen "views the activities and spending habits of this leisure class in terms of conspicuous and vicarious consumption and waste. Both are related to the display of status and are to functionality or usefulness."

In economics, consumerism may refer to economic policies that emphasize consumption. In an abstract sense, it is the consideration that the free choice of consumers should strongly orient the choice by manufacturers of what is produced and how, and therefore orient the economic organization of a society (compare production, especially in the British sense of the term).

ISSN : 2456-1363

International Journal of Scientific Research & Growth

A multidisciplinary journal for empowering the research

Accelerated cleavage of C-N and P-N bonds in tri 2-chloro-5-nitro aniline phosphate ester in acidic medium

Dr. M.K. Singh[1] and Dr. K.K.Upadhyay[2]
[1]Department of Chemistry, Govt. P. G .College, Dholpur (Raj.)-328001
[2]Department of Chemistry, Kanda P. G .College, Dholpur (Raj.)-328001
Email: drsinghchem@gmail.com

ABSTRACT:

Acid hydrolysis of Tri-2-chloro-5-nitro aniline phosphate has been carried out in the acid region (1 to 7 mol dm^{-3}) at 98°C in 20% aqueous dioxane (V/V) medium. Ionic strength data exhibits different combination of conjugate acid species and presence of acid catalysis. Theoretical rates calculated from several empirical form of Debye-Hückel closely agree with those experimentally observed. Unorthodox behaviour of the hydrolytic reaction has been decided by the use of different acidity and basicity e.g. Hammett acidity function, Zucker-Hammett equation, Bunnett parameters, Bunnett-Olsen parameters. Arrhenius parameters, Concentration and Solvent effect. The most probable mechanism for the hydrolytic reaction has been given by using Isokinetic relationship. The Product involves P-N bond fission which is strengthened by computative kinetic data.

Key words: Tri 2-Chloro-5-Nitro Aniline Phosphate, Conjugate acid species, Kinene approach.

Bio Bulletin
(Published by Research Trend, Website: www.bio-bulletin.com)
ISSN NO. (Print): 2454-7913
ISSN NO. (Online): 2454-7921

Impact of Dyes on the Chemistry of Water and its Implications: A Review

K. K. Upadhyay*, Ankita Chandra Pandey** and Jyoti Mahajan***
*Department of Chemistry, Kamla Raj College, Gwalior (Madhya Pradesh), INDIA
Department of P. G. Studies and Research in Chemistry,
**Government M.L.B. P.G. College, Deen Dayal University, Gwalior (Madhya Pradesh), INDIA
***Department of Environmental Science, Jiwaji University, Gwalior (Madhya Pradesh), INDIA

(Corresponding author: K. K. Upadhyay)
(Published by Research Trend, Website: www.bio-bulletin.com)
(Received 09 December 2016, Accepted 22 January 2017)

ABSTRACT: The textile dye industry is widespread and is fundamental and essential as these provide employment to large population. On the other hand, the mixing of dyes in water may change the chemistry of water and may cause other impacts to the consumers directly and indirectly. It is very difficult to separate dyes from water by using conventional techniques. An attempt has been made to review the impact of dyes and its impacts on the society with the help of existing literature.

Keywords: water, dyes, impacts, chemistry, dye industry

INTRODUCTION

The textile industry is one of the rapidly growing sectors of India's economy. It has the capacity to reduce unemployment and boost demand. Its processes are based on chemical reactions in liquid medium, thereby generating large volume of toxic wastewater. Some of the major processes include: Sizing: saturation of warp hydrophobic wraps by high viscosity macromolecular solution using sizes like starch and desizing: removal of sizes from fabric using strong chemicals such as acids, bases or oxidizing agents (Babu et al., 2007). Other important processes include bleaching-treatment of cotton and polyester to achieve a white absorbent fabric that is suitable for dyeing, printing and finishing (Garg et al., 2007). The bleaching process uses oxidizing agents like chlorine and hydrogen peroxides. Dyeing and printing are achieved by the use of various types and colour of dye such as azo dyes and sulphur dyes.

Historically, the interiors of a home furnished in rich, deep colors indicate a great amount of affluence and high standing. Today, as in the past, warm hues lend a feeling of comfort and warmth to a home. The task of making clothing and home furnishings fell to the lady of a house, or on her servants, until the mid- 1900s.

Fabric remains dating back to over 1000 B.C. have been identified as dyed using madder and cochineal (Masters, et al., 1990) and colorists in America used plants such as indigo to color their garments (Edgar, 1998).

The ready-to-wear apparel industry is only about 100 years old. Records date clothing factories back only to 1832 (Sample et al., 1989). As the responsibility for the making of clothing and textiles moved from within the home to factories, the stigmas and importance of color began to slacken. This is not to say, however, that colors do not have importance in society today. Recent studies have shown certain colors to give advantages to sports teams. For example, a study by Durham University found that, when other factors are equal, competitors wearing red had a considerable advantage in sporting events (Pincott, 2008). Also, certain hues denote feelings and power. Blue generally symbolizes peace and tranquility, while many men consider their red ties a "power tie".

Techniques used to identify dyes in water

In 1991 (Yinon and Saar 1991) used HPLC technique to analyze series of disperse dyes extracted from polyester and cellulose fibers, a basic dye from orlon fiber and a vat dye from denim.

Global Journal of Biochemistry and Biotechnology 2(1): 131-136, 2016
ISSN 2078-4465X
©GSH Publications, 2016
DOI: 10.5829/idosi.gjbb.2016.131.136

Identification of dyes in cloth dyeing industry of Jaipur (India) and its impact on water quality

Ankit Chandra Pandey and Krishan Kant Upadhyay

Department of Basic Studies and Research in Chemistry, Government M.P.P.G. College (Govt. University), Gwalior, (M.P.), India.

Department of Chemistry, ITM University, Gwalior

Abstract

Textile industries considerably contribute to water pollution of adjoining surface water bodies which in turn irreversibly alters biological, chemical and physical nature of the water bodies. The analysis of the effluent was carried out by following the standard methods of APHA, 1998. The dyes were identified with the help of Gas Chromatography Mass spectrograph. The objectives of present study were to assess the major physicochemical parameters like temperature, pH, color, DO, BOD, COD, alkalinity, chlorides, hardness, nitrate, phosphate, TS, TDS of the effluent. The present investigation found high level of pollution in the city of Jaipur due to the cloth dyeing industry. The experimental data suggests a need to implement sensitive legislative, compatible policies and programmes for improvement in the industrial waste water treatment methods in the city. It also suggests a need of committed, internationally recognized fast track strategy to assess the quality of waste water effluent and generation of international standards for evaluation of contaminated fields.

Keywords: Dye, pollution, Physicochemical parameters, treatment, policies

INTRODUCTION

The textile industry is one of the rapidly growing sectors of Jaipur's economy. It has the capacity to reduce unemployment and labour demands. Its processes are based on chemical reactions in liquid medium, thereby generating large volume of toxic wastewater. Some of the major processes include; Sizing- saturation of mainly hydrophobic wraps by high viscosity macromolecular solution using sizes like starch and desizing- removal of sizes from fabric using strong chemicals such as acids, bases or oxidizing agents (Babu et al., 2007). Other important processes include bleaching-treatment of cotton and polyester to achieve a white absorbent fabric that is suitable for dyeing, printing and finishing (Babu et al., 2007). The bleaching process uses oxidizing agents like chlorine and hydrogen peroxides. Dyeing and printing are achieved by the use of various types and colour of dye such as azo dyes and sulphur dyes.

Corresponding author: Krishan Kant Upadhyay, Department of Chemistry, ITM University, Gwalior
Kkupadhyay1@rediffmail.com

27

An Investigation on Physical, Chemical and Bacteriological Quality of Drinking Waters and Health Issues of the Rural Areas in Uttar Pradesh, India

[illegible]

ABSTRACT: [illegible]

Keywords: [illegible]

INTRODUCTION

[illegible]

MATERIALS AND METHODS

[illegible]

IJSE

Occupational Exposure and Awareness of Occupational Safety and Health Among Cloth Dyeing Workers in Jaipur India

Krishna Kant Upadhyay[1], Anita Chandra Pandey[2]

[1] Department of P.G. Studies and Research in Chemistry, University RLP P.G. College Pilani, Jhunjhunu, Rajasthan, India

[2] Author for Correspondence: Research Scholar, [redacted]

Received: 06 Oct 2013, Revised: 18 Nov 2013, Accepted: 12 Dec 2013

ABSTRACT

The objective of the study was to assess the health risk factors and awareness of Occupational safety and health of workers in cloth dyeing industry of Jaipur.

A pretested questionnaire was used to evaluate the health problems and awareness of occupational safety and health among workers.

The majority of these workers were suffering from eye irritation, back pain, allergies, general weakness, with most workers having three to five of these health problems. Back pain was found as 20%, 14.4%, 46.8%, of the workers in the age group of 20-35, 36-50, 51-65 years respectively, during the study period. Conjunctivitis contact dermatitis irritable was observed in 13.3%, 26.3%, 33.8%, of the workers in the age group of 20-35, 36-50, 51-65, years respectively.

A large number of illegues in different age groups are an indication that this industry exposes workers to many health hazards and lack of awareness and non availability of PPE in this industry is aggravating the health problems of the workers.

Key words: Health Risks, Awareness, Workers, Dyes, Occupational Health, Jaipur

INTRODUCTION

The textile industry is one of the rapidly growing sectors of Jaipur's economy as this industry provides employment to a large number of people in Rajasthan [1]. Jaipur, the State capital that has a population of more than two million people and most of the textile industries of Sanganer are concentrated in the urban area. Their textile industries are estimated to be around 500 block and screen-printing units in Jaipur and near about 10,000 workers are working in this industry that get exposed to a large number of chemicals and become the victims of different types of diseases.

The origin of synthetic materials used in the textile industry has produced many new types of dyes have been developed and put into regular use. The different dyes that are used in this industry include acid dyes, premetallized acid dyes, chrome dyes (mordant dyes), cationic dyes (basic dyes), direct dyes (substantive dyes), direct developed dyes, disperse dyes, naphthol dyes, reactive dyes, sulfur dyes, and vat dyes [2]. On the other hand, workers are exposed to an increasing number of chemicals and occupational hazards in the textile dye industry. The exposure of workers to different types of chemicals causes different types of diseases like skin allergies, respiratory diseases and musculoskeletal disorders. Skin allergies i.e. occupational dermatoses contribute a large number of occupational diseases and could even surpass all other industrial diseases put together [3]. Other organs such as the eyes, lungs, liver and urinary bladder may also be involved [4]. The common factors that predispose to the development of contact dermatitis are existing dermatoses, pressure, friction, sweating and prolonged immersion in water [5]. Genetic influences also play an important role [6]. Respiratory diseases may cause dry or productive cough of chronic or non-chronic nature, asthma and other respiratory symptoms.

Globally, Musculo Skeletal Diseases (MSD) are the largest single cause of work-related illness, accounting for over 33% of all newly reported occupational illnesses in the general population and 77% in construction workers. MSD is also the largest cause of sick absenteeism, days of work lost and disability. It affects productivity at work, causes increased economic burden due to costs of workers' compensation, healthcare and insurance [7]. Work patterns associated with MSD include heavy

World Journal of Agricultural Sciences 9(1): 44-50, 2013
ISSN 1817-3047
© IDOSI Publications, 2013
DOI: 10.5829/idosi.wjas.2013.9.1.1420

Comparative Study of Physicochemical Properties and Fertility of Soils in Gwalior, Madhya Pradesh

[illegible], [illegible], [illegible]

Department of Environmental Sciences, JIVA University, Gwalior, Madhya Pradesh, India
Department of Chemistry, CDM University, Gwalior, Madhya Pradesh, India

[illegible] Soil samples were collected from agricultural, forest, industrial, [illegible] and from similar soils from different locations from the Gwalior city. The samples were investigated for physical and chemical properties. In general, it was observed that the agricultural soil samples were similar in [illegible] to other soils tested in the present investigation. However, the industrial soil samples that were collected in this study showed a fertility value that were comparable to average values recorded in agricultural soil and barren soil samples. The variation in physicochemical properties of the soils examined is to be influenced by the topography to a greater extent in the studied area. The study also identified that the industries and the topography of a region exert a significant influence on the soil properties. Therefore, developmental projects are requiring the agriculture soil in Gwalior city is a threat for the sustainable development of the region where soil plays an important role in the livelihood of the majority of the rural population.

Key words: Soil · Chemical properties · Micronutrients · Sustainable development

INTRODUCTION

Soils are natural [illegible] materials at the surface of the earth and are composed of solids, liquid and gas. They have organic and inorganic matter, which are continually [illegible] by many processes. Soil is composed into a porous body that accommodates air and water [1]. The truth is that soil is a marvelous substance, a living treasure of astonishing beauty, complexity and frailty. It is a complex mixture of weathered mineral particles from rocks, partially decomposed organic materials and a host of living organisms. It can be considered an ecosystem by itself. Soil is an essential component of biosphere and it can be used sustainably, or even enhanced, under careful management. Building good soil is a slow process and under best circumstances, about topsoil accumulates at a rate of about 1/2 tons per ha (2.5 acres) per year enough soil to make a layer about 1 mm deep when spread over a hectare. Under poor conditions, it can take thousands of years to build that much soil. Perhaps one-third to one-half of the world's current croplands are losing fertile topsoil faster than it is being replaced. In some of the worst spots, erosion carries away almost 2.5 cm (1 inch) of topsoil per year. With human like that, agricultural productivity has already begun to fail in many areas.

Soil fertility and plant nutrition are two closely related subjects that emphasize the forms and availability of nutrients in soils, their movement to and their uptake by roots and the influence of [illegible] within plants [2]. Without sustaining soil fertility, it is difficult to boost agricultural production for feeding the alarming population. Therefore, to get optimum, sustained long lasting and self-sufficient crop production, soil fertility must maintained. The loss of soil nutrients is related to cultural practices like cultivation. The removal of vegetative cover (such as straw or stubble) or burning plant residues as practiced under the traditional system of crop production or the annual burning of vegetation on grazing land are major contributors to the loss of nutrients [3], while the use of chemical fertilizer is also minimal.

There are no specific studies that have focused on soil properties in relation to topography and crop use. Significant areas of Gwalior occur along the Gwalior Chambal region. Indeed our study covered different areas of Gwalior that extend from Bilaigarh (78° 10' 00" E) to

Corresponding Author: Khadeeja Ahmed Wani, Department of Environmental Sciences, JIVA University, Gwalior Madhya Pradesh, India.

Volume Publication

Certificate

This is presented to K. K. Upadhyay, Raghvendra Singh, Kuldeep Parmar, Amit Chandel, Pandey and Manoj Kumar Singh for publication of a book chapter entitled "Physico-Chemical Study of Soil of Various Lands Area in Dhuljur (Rajasthan)" in the book "Frontiers in Life Science Volume VII (ISBN: 978-93-91768-05-2)" published by our publishing house in the month of June, 2022

Bazooka

Published by: Book Bazooka Publication
Avak Vikas, Keshavpuram, Kanpur, U.P. India 208017
Website: www.bookbazooka.com
Email Address: info@bookbazooka.com
Mob: +91 7844 918767
BookBazookaOfficial
BookBazooka
BookBazooka
BookBazooka
BookBazooka
BookBazooka

ISBN: 978-93-86895-67-7

Cost: 799.00/- INR

Editors: Dr. Rafiq Lone, CORD, University of Kashmir, Hazratbal – Srinagar
Dr. Khursheed Ahmad Wani, Govt Degree College Bijbehara - Kashmir

Publication Year: - 2019

CHAPTER-9
PHYSICO-CHEMICAL STUDY OF GROUND & SURFACE WATER OF DHOLPUR CITY (RAJASTHAN)

K.K. Upadhyay, Rohitash Singh Gurjar Deeksha Chamauriya
Department of Chemistry, Kanta P.G. College, Dholpur, Rajasthan - 328001
Anish Chandan Pandey
Govt Model Science College Gwalior Madhya Pradesh
M. K. Singh
Department of Chemistry, Govt P G College Dholpur
Corresponding Author Email
kkupadhyay1980@gmail.com

ABSTRACT: The present investigation was carried out to determine the physico -chemical study of water in Dholpur city. Standard methods were followed to carry out the different parameters of the water. It was found that drinking water is free from pollutants that may cause effects to the residents of Dholpur. Parameters were within the range as specified by WHO and BIS. However, it is recommended to take measures that will keep the water parameters within limits for the general interest and health of people.

Keywords: water, analysis, health, WHO, Dolpur

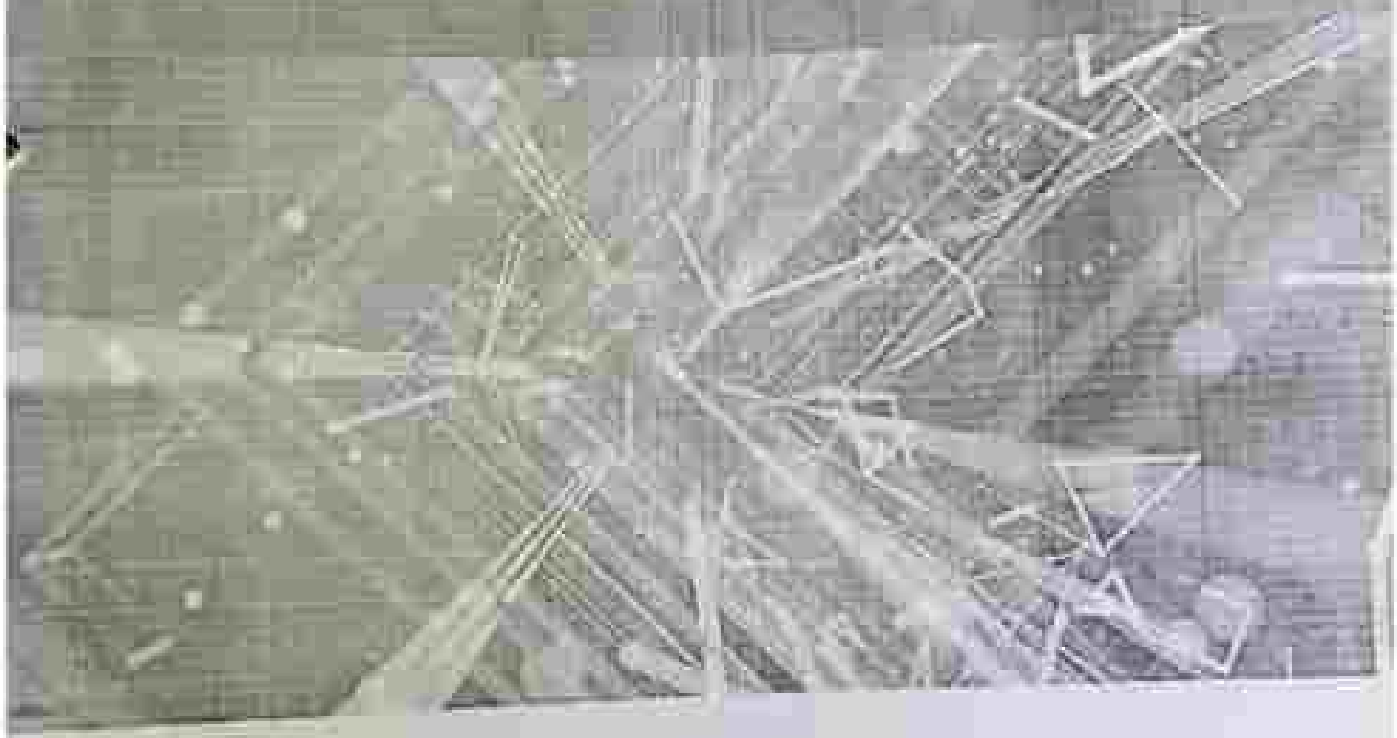
1. INTRODUCTION

Water is incredibly basic for survival of every single living life form. The nature of water is essential worry for humankind since it is legitimately connected with human welfare. In India, a large portion of the population is subject to groundwater as the main wellspring of drinking water supply. The groundwater is accepted to be similarly much perfect and free from contamination than surface water. However, delayed-release of mechanical effluents, household sewage and strong

ISBN: 978-93-88901-56-7

TRENDS IN INTERDISCIPLINARY RESEARCH

VOLUME I



Editor:
Dr. Shweta Rani
Dr. Ankita Jaiswal
Dr. Kuldeep Kaur
Dr. Shrikant Verma

Bhumi Publishing, India

First Edition: May 2023

First Edition: May, 2023

ISBN: 978-93-80901-56-7

Published by

Shanti Publishing

Jaipur, Khalasa, Kollegal 416207, Maharashtra, India

Website: www.shantipublishing.com

E-mail: shantipublishing@gmail.com

Book Available online at:

https://www.shantipublishing.com/books/

CERTIFICATE

OF PUBLICATION

This is presented to

अजगर खान, अंशुल सोनी और कृष्णकांत उपाध्याय

for publication of a book chapter entitled **"योग का हमारे स्वास्थ्य पर प्रभाव"** *in the book "Trends in Interdisciplinary Research Volume I (ISBN: 978-93-88901-56-7)" published by our publishing house in the month of May, 2025.*

ISBN: 978-93-91760-07-2

Frontiers in Life Science

Volume VII

Editors

Dr. Nilesh Joshi

Dr. Rajendra V. Salunkhe

Dr. Rahul L. Musiram

Dr. Mohd. Shoeb

First Edition: 2022

Frontiers in Life Science Volume VII

ISBN: 978-93-91768-07-41

Editors

Dr. Nitesh Joshi
Department of Botany,
Ram College of Arts, Science & Commerce
Mumbai

Dr. Rajendra V. Sahunkhe
Department of Zoology,
Arts, Science & Commerce College,
Indapur, Dist. Pune

Dr. Rahul L. Meshram
Department of Biochemistry,
Dada Ramchand Rakhru Sindhu
Mahavidyalaya, Pandhpauli, Nagpur

Dr. Mohd. Shoeb
Department of Zoology,
Gandhi Faiz e Aam College,
Shahjahanpur (UP)

Bhumi Publishing

2022

First Edition: June, 2022
ISBN: 978-93-91768-07-2

Published by:

Bhumi Publishing,
Nigave Khalsa, Kolhapur 416207, Maharashtra, India
Website: www.bhumipublishing.com
E-mail: bhumipublishing@gmail.com

Book Available online at:

https://www.bhumipublishing.com/books/

Physico-chemical study of Chambal river water in Dholpur (Rajasthan)

P.S. TIWARI and M.K. SINGH*

Zoology Department, P.G College, Ambah (India)
*Department of Chemistry, Government P.G. College, Dholpur (India)

(Received: August 30, 2008; Accepted: October 09, 2008)

ABSTRACT

This study was carried out in each season for one year, deals with the assessement of physico-chemical parameters of chambal river water in Dholpur district. The samples were tested for their temperature, pH, electrical conductivity, turbidity, hardness, BOD, COD, dissolved oxygen, sulphate, chloride, calcium and magnesium indicating the deteriorating life sustaining capacities of the river due to domestic and industrial pollution.

Key words: Chambal river water, physico-chemical parameters, water quality.

INTRODUCTION

Water is a vital component of the environment which sustains life on earth. The rapid pace of industrialization, urbanization, agricultural activities and population growth have made all the sources of water either polluted or contaminated globally. Release of treated and untreated industrial effluents in an unplanned manner is one of the major causes of water pollution. Almost 70% of water in India has become polluted due to the discharges of domestic sewages, detergents and industrial effluents into natural water resources' e.g. rivers, lakes etc.

Chambal, the principal tributary of river Yamuna and the most important river of the Malwa plateau, originates from Janapao hill in M.P, enters Bundi, Kota and then Dholpur districts of Rajasthan and unite with Yamuna, 38 km away from Etawah in U.P. As chambal river flows from different areas of dholpur district, it becomes polluted due to which BOD in the river often rises to 9-14 mg/litre. Roughly 70 mld. of municiple waste is also dumped in chambal river from different areas situated on its bank in Dholpur district. The large population of coastal area of this river is totally dependent on its water. Therefore , it is necessary to assess water quality of Chambal river water at upstream site A (Highway) and downstream site D (near Railway bridge).

In the present observation, water quality with reference to physico-chemical parameters have been assessed at a specific stretch of the water length (approx. 10 kms.) of chambal river. The study has been conducted at the following four sites :

A. National Highway (Upstream)
B. Shamshan Ghat
C. Shergarh Fort
D. Near Railway Bridge (Downstream)

EXPERIMENTAL

Water samples for the present investigation were collected from all four experimental sites of the chambal river in Dholpur each after three months interval from October 2005 to July 2006. They were analysed for physico-chemical parameters like temperature, turbidity, electrical flow conductivity (EC), hardness, pH Biochemical Oxygen Demand

JOURNAL OF SCIENTIFIC & TECHNOLOGICAL RESEARCH
AN INTERNATIONAL PEER REVIEWED JOURNAL OF SCIENTIFIC RESEARCH
LISTED IN ULRICH'S GLOBAL SERIALS DIRECTORY
VOLUME- 06, ISSUE-02, SEPTEMBER-2016 ISSN: 2231-4709, © KESRAD, www.kesrd.com

BIOMONITORING OF CHAMBAL RIVER WATER IN DHOLPUR (RAJASTHAN)

P. S. TIWARI[1], R. K.VERMA[2] & M. K.SINGH[3]

[1]DEPARTMENT OF ZOOLOGY, KAMLA P. G. C COLLEGE, DHOLPUR
[2]DEPARTMENT OF ZOOLOGY, R. B. S. COLLEGE, AGRA
[3]DEPARTMENT OF CHEMISTRY, GOVT. P. G. COLLEGE, DHOLPUR (RAJ.)

RECEIVED: 19.06.2016, REVIEWED: 09.09.2016, ACCEPTED: 15.09.2016
WORDS: 6648, REFERENCES: 05, FIGURES: 00, TABLES: 01

ABSTRACT

The Present study was conducted to understand the biological analysis of Chambal river water in Dholpur,Rajasthan.The Chambal river is located in west central India and flows through three Indian states i.e Madhya Pradesh, Rajasthan and Uttar Pradesh.The analysed water quality data indicates that the Chambal river water in Dholpur is pollution free and can serve as a good habitat for many aquatic flora and fauna including endangered species.

Keywords: water, coliform, faecal coliform Phytoplankton and Zooplankton

1. INTRODUCTION

Water is one of the prime necessities of life for growth and activities of all living beings. In India, rivers are the major sources of drinking water from ancient times besides their usage in agriculture, washing, bathing, in industries, atomic power plants and several others. The quality of water in rivers is deteriorating day by day due to continuous load of undesirable pollutants. Apart from the supply of potable water, the river is also very important ecologically as it harbors very rich biodiversity (Crawford, 1968, Verma et al., 1993). The Chambal River is a tributary of the Yamuna River in central India and forms part of the greater Ganges drainage.

The river Chambal is a tributary of the Yamuna river in central India and flows through three big states of India like Madhya Pradesh, Rajasthan and Uttar Pradesh. It's a perennial river which originates from Singar Chauri peak of Janapav hill in Mampura south of Dhasi town near Indore district, on the south slope of Vindhyachal range in M.P. The river flows north-northeast through Madhya pradesh, for a time through Rajasthan then forming the boundary between Rajasthan and Madhya Pradesh before turning south-east to join the river Yamuna at Pachnada near Bhare in Etawah district of U.P. The river passes from many cities of Rajasthan i.e Bundi, Kota, Sawai Madhopur and Dholpur. The biggest part of population of these cities completely depends on its water for various purpose of life.

The Chambal River is considered pollution free (Hussain et al., 2011) and hosts an amazing riverine faunal assemblage including rare species of crocodilians, the mugger and gharial, 8 species of freshwater turtles, smooth-coated otters, gangetic river dolphins, skimmers, black-bellied terns, sarus cranes and black-necked storks, amongst others. In this paper, an attempt has been made to assess the water quality changes during a decade based on physico-chemical to study the extent of pollution in river Chambal in National Chambal Sanctuary area.

In the present observation, water quality with reference to physico-chemical parameters have been assessed at a specific stretch of the water length (approx. 10 kms.) of Chambal River. The study has been conducted at the following four sites:

A. National Highway (Upstream)
B. Shamshan Ghat
C. Shergarh Fort
D. Near Railway Bridge (Downstream)

2. MATERIAL AND METHODS

Water samples for the present investigation were collected from all four experimental sites of the chambal river in Dholpur each after three months interval from October 2005 to July 2006. They were analysed for biological parameters like coliform, faecal coliform, phytoplankton and zooplankton.

COLIFORM

For measuring coliform, the multiple tube fermentation process was used. The technique, LMPN count, involves the several dilution of the sample in a suitable medium after the expiry of the incubation period. The multiple tubes were examined by production of gas by the coliform bacteria. This process is known as presumptive test. Since this reaction may also be produced by the organism other than the coliform, therefore the positive tubes from the presumptive test were subjected to a confirmatory test. The density of coliform bacteria was calculated on the basis of positive and negative combination of the tube using MPN table. Lauryl tryptose broth was used in the presumptive test.

FAECAL COLIFORM

For counting the MPN of faecal coliform, multiple tube fermentation technique was used. The faecal coliform test may be expected to differentiate between coliform of faecal origin (intestine of warm blooded animal) and coliform from other sources. The production of gas in a fermentation tube within 24 hours or less is considered a positive reaction indicating faecal origin, failure produce gas constitute a negative reaction indicating it source other than the intestinal tract of warm blooded animal. The estimation of bacterial density index, calculated faecal coliform densities.

Nature & Environment

Vol. 21 (1), 2016: 33-38

Website: www.natureandenvironment.com

RESEARCH ARTICLE

Studies on Morphological Changes in *Catla catla* in Chambal River at Dholpur District

Pratap Singh Tiwari
Department of Zoology, Kanda P.G. College, Dholpur
Email: pratapsinghtiwari1@gmail.com

Received: 23rd October 2015; Revised: 24th December 2015; Accepted: 26th December 2015

ABSTRACT

In contaminated waters, fish may exhibit whole animal, morphological, histopathological, cellular, organismic or parasitic aspects of abnormalities, some of which can be used as biomarkers of contamination exposure. The use of abnormalities in fish as biomarkers has become more prevalent in recent years. Biomarkers in fish can provide a chronic indication the environmental condition than can more general and acute indices such as physicochemical analyses or water quality parameters. Due to above reasons morphological effects on fishes has been observed in present study.

Key words: *Morphology, Catla catla, Chambal River*

INTRODUCTION

There are three approaches normally used for the analysis of the any system, theoretical experimental and semitheoritical. Theoretical approach is considered more appropriate as it provides inside information and allows both extrapolation as well as interpolation and also help in optimization with full coverage. Experimental data are taken to calculate the information desired. This may be considered as the second best as it may be determined independently. This method does not permit extrapolation and interpolation with high degree of reliability and accuracy. The third approach is based on combination of experimental investigation and theoretical development. In present investigation efforts have also been made to obtain accurate data on the effect of temperature, pH, D. O. on Labeo-calbasu and catla-catla obtained from River Chambal and finally the experimental results attained have been explained. However, the cause-and-effect relationships between biomarkers and certain suspected pollutants cannot always be established. Assessing morphological deformities is one of the most straightforward methods to study the effects of contamination on fish because of the ease of recognition and examination when compared with other types of biomarkers. Different types of morphological abnormalities have been reported in fish taken from contaminated waters, including fin erosion skull deformities; jaw deformities; skeletal deformities such as lordosis, scoliosis, and kyphosis; opercular deformity; fin deformity; lower lip protrusions; gill deformity; ocular disorders; scale deformity and disorientation, and neoplasia or hyperplasia.

MATERIALS AND METHODS

(Collection of fishes from Chambal River at Dholpur)

Water pollution especially in River Dholpur, which receives domestic and industrial effluents either directly or indirectly, the following parameters have been selected for details investigation. Temperature, pH and D. O. The main features of the present investigation are as follows-

1. Collection of fishes from River Chambal at Dholpur and their acclimatization in laboratory condition.

e-ISSN: 2455-6378

Annals of Natural Sciences

Annals of Natural Sciences

ORIGINAL ARTICLE

Assessment of Calcium and Magnesium in Chambal River at Bhalpur District

Pratap Singh Tiwari
Department of Zoology, Kamla PG College, Bhalpur
Email: pratapsingh1tiwari@gmail.com

ABSTRACT

Pollution of water is responsible for a very large number of mortalities and incapacitations of the world population. Water resources has led us to a water without which vital activities are not possible on the planet. Are also been adversely affected by all kinds of activities of human being. Today on the bank of the Chambal we which is an important River of Bhalpur in south west M.P. in eastern Rajasthan set by the mighty river of the Jamuna hill and stretching about 870 to the M.P. is known north east of M.P. region, Bhar, Ujjain, Indore, Mandsor then entered in Rajasthan in Kotta, Dholpur and unite with Yamuna in the region at 20 km away from Etawah. The Chambal River is a symbol of culture of M.P. Heritage prosperity as well as philosophy. Since beginning of Sanskrit many rishis religious are linked to the Chambal. Chambal is a symbol of prosperity of culture, of power of challenging the dark forces and integrity of M.P. and Rajasthan, that tribe to subvert their ethical and traditional values. It was since the beginning of 1970's that environmental pollution became a serious problem in India, because the rapid industrialization and Urbanization have aggravated this problem.

Key words: Calcium, Magnesium, Chambal River, Water quality.

Received: 5th Sept. 2017, Revised: 10th Oct. 2017, Accepted: 21st Oct. 2017

How to cite this article:

Tiwari P.S. (2017). Assessment of Calcium and Magnesium in Chambal River at Bhalpur District. Annals of Natural Sciences, Vol. 3(4): December, 2017: 37-37

MAGNESIUM

It also occur in all kinds of natural waters with calcium, but its concentration remains generally the lower calcium. Their principal sources in the natural waters are various kinds of rocks. Sewage and industrial waste are also important contributors of Magnesium. Magnesium adds to the hardness of water.

Principle: Calcium and magnesium a complex of wine red colour with Eriochrome Black-T at pH 10.0. The EDTA has get a stronger affinity for Ca^{++} and Mg^{++} the former complex is broken down a new complex of blue colour is formed. The value of Mg^{++} can be obtained by subtracting the value of calcium from the total of Ca^{++}, Mg^{++}.

Process: The volume of EDTA used in calcium determination and also in hardness (Ca^{++}, Mg^{++}) determination with same of the sample as taken in the calcium determination.

Calculation:

$$\text{Magnesium (mg/l)} = \frac{\text{Y-X} \times 400.8}{\text{Volume of sample} \times 1.645}$$

Where X = EDTA used in calcium determination for the same volume of sample.
Y = EDTA used in hardness determination.

The Annals of Zoology
ISSN (Print): 0003-5009
Annals of Zoology, Vol. 21: December 2015, 46-48

Studies on Tolerance Limit in Major Fishes of Chambal River at Dholpur District

Pratap Singh Tiwari[1] and R.K. Verma[2]
[1]Department of Zoology, Kanchi PG College, Dholpur
[2]Department of Zoology, R.B.S. College, Agra
Email: pratapsingh0tiwari@gmail.com

ABSTRACT

Potentially harmful substances e.g. pesticides, heavy metals and hydrocarbons are often released into the aquatic environment. When large quantities of pollutants are released there may be an immediate impact as measured by large scale sudden mortalities of aquatic organisms, e.g. fish kills resulting from contamination of waterways with agricultural pesticides. Lower levels of discharge may result in an accumulation of the pollutants in aquatic organisms. The end results, which may occur long after the pollutants have passed through the environment, include immunosuppression, reduced reproduction and damage to gills and epithelia. Tolerance limit or survival efficiency has been taken into consideration in present investigation.

Key words: *Tolerance limit, Major carps, Dholpur district.*

INTRODUCTION

Fish and other aquatic animals are subject to a broad variety of stressors because their homeostatic mechanisms are highly dependent on prevailing conditions in their immediate surroundings. Yet few studies have addressed stress as a potential confounding factor for bioassays that use fish as test subjects. Common stressors encountered by captive fish include physical and mental trauma associated with capture, transport, handling, and crowding; malnutrition; variations in water temperature, oxygen, and salinity; and peripheral effects of contaminant exposure or infectious disease. Some stress responses are detectable through gross or microscopic examination of various organs or tissues; as reported in the literature, stress responses are most consistently observed in the gills, liver, skin, and components of the urogenital tract. In addition to presenting examples of various stressors and corresponding morphologic effects, this review highlights certain challenges of evaluating stress in fish: [1] stress is an amorphous term that does not have a consistently applied definition; [2] procedures used to determine or measure stress can be inherently stressful; [3] interactions between stressors and stress responses are highly complex; and [4] morphologically, stress responses are often difficult to distinguish from tissue damage or compensatory adaptations induced specifically by the stressor.

However, the link between adverse water quality and fish diseases is not proven. Alleged pollution-related diseases include epidermal papillomas, fin/tail rot, gill disease, hyperplasia, liver damage, neoplasia and ulcerations. Many surveys have indicated a greater proportion of diseased fish in polluted compared to non-polluted marine sites. Yet, the value of such surveys may be questioned. Specific examples of fish diseases thought to reflect the effects of pollution include surface lesions attributed to Serratia plymuthica, fin and tail rot caused by Aeromonas hydrophila and Pseudomonas fluorescens, gill disease resulting from the activity of Flavobacterium spp., vibriosis as caused by Vibrio anguillarum, and enteric redmouth [causal agent, Yersinia ruckeri]. Research indicated that some of the diseases caused by Aeromonas, Flavobacterium and Pseudomonas resulted from generally adverse water quality, i.e. higher than usual quantities of organic material, oxygen depletion, changes in pH values and enhanced

Website: www.vedicbooks.com/ijpb.html

Assessment of Dissolved Oxygen a Marker of Water Quality Index in Chambal River at Dholpur District

Pratap Singh Tomar and Mahendra Lodhi*
Department of Zoology, Kanchi P.G. College, Dholpur
*Department of Zoology, Govt. College, Dholpur
Email: pratapsingh.tomar@gmail.com

Received: 23rd April 2017, Revised: 1st May 2017, Accepted: 3rd May 2017

ABSTRACT

Water quality index was calculated for the study of the river Chambal at Dholpur district of Rajasthan, India. The water quality index was calculated for the study of the river Chambal at Dholpur district of Rajasthan, India.

Key words: DO, water quality index, Chambal river, Dholpur

INTRODUCTION

Discharge of chemical waste in River is a serious environmental problem today. This may seriously affect the life of aquatic fauna in Chambal River. Therefore, entire food chain become poisonous. The purity of Chambal has never been in doubt yet we have allowed the pollution of this River which is the symbol of spirituality of the people of M.P. and Rajasthan. Water is a vital component of the environment which sustains life on earth. The rapid pace of industrialization, urbanization, agricultural activities and population growth have made all the sources of water either polluted or contaminated globally. Release of treated and untreated industrial effluents is an unpleasant manner is one of the major causes of water pollution, almost 75% of water in India has become polluted due to the discharges of domestic sewage, detergents and industrial effluents into natural water resources i.e. g. Rivers, lakes etc. Chambal the principal tributary of River Yamuna and the most important River of the modern plateau originates from Janapao hills in M.P., enters Kotah, Bundi and then Dholpur districts of Rajasthan and unite with Yamuna, 38 km away from Etawah in U.P. on Chambal River from different areas of dholpur district, it becomes polluted due to which fed to the River often rises to 9.14 mg/ltr. Roughly 70 mld of municipal waste is also dumped in Chambal River from different areas situated on its bank in dholpur district. The large population of riverside area of this River is totally dependent on its water. Therefore, it is necessary to assess water quality of Chambal River water at upstream site and downstream site of the ecological studies revealed that inspite of similar pattern of relationship exhibited by abiotic factor. There occurs adversity in nature of the Chambal River in form of flora & fauna flourishing in it. Chambal is a little River accounts for the difference in the range of water temp recorded in it.

MATERIALS AND METHODS

D.O. (DISSOLVED OXYGEN)

It is one of the most important parameters in water for assessment and reflects the physical and biological process prevailing in water. Dissolved oxygen is essential to maintain the higher forms of biological life in water. Low oxygen in water can kill fish and other organisms present in water. Oxygen saturated water have a pleasant taste while deficiency of it have an unpleasant taste.

The dissolved oxygen in Chambal River water sample was determined by modification of Winkler's and azide iodometric method (Apha-1992).

Website: www.ijcrbp.com/ijrbp.html

ISSN: 2319-8141

Studies on Total Hardness and Calcium Content in Chambal River at Bhojpur District

Pratap Singh Pawar* and R.K. Trivedi
Department of Zoology, Kamla MS College, Udaipur
Department of Zoology, R.B.S. College, Agra
Email: pratapsinghpawar11@gmail.com

Received: 17th Oct. 2017, Revised: 08th Dec. 2017, Accepted: 12th Dec. 2017

ABSTRACT

The study was carried out in each season for two years, deals with the assessment of physico-chemical parameters of Chambal River water in Dhaulpur District. The samples were tested for their hardness and calcium following the determination of the River due to domestic and industrial pollution.

Key words: *Water quality, Chambal River, Hardness, Calcium content.*

INTRODUCTION

The present study was conducted to understand the physico-chemical characteristics of Chambal River in Dholpur in Madhya Pradesh. The Chambal River is located in west central India and flows through three Indian states, Madhya Pradesh, Rajasthan and Uttar Pradesh. The Chambal also forms part of the Rajasthan Madhya Pradesh boundary. The stretch of Chambal River contained in the National Chambal sanctuary (located at 26° 33' 36" 92"E, 78° 28' 79" 15"E) is extending up to 600 km downstream from Kota (Rajasthan) to the confluence of the Chambal with Yamuna River. On the basis of various parameters studied, Chambal River in this stretch can be placed under the category of Class C as per CPCB standards. The analysed water quality data of year 2014-2015 indicates that the Chambal River water in the sanctuary area is pollution free and can serve as a good habitat for many aquatic flora and fauna including endangered species. Hardness of water indicates that boiling point of water increase due to presence of calcium and magnesium in water. In water hardness mostly occur due to major cations of Calcium and Magnesium. The anions which are responsible for hardness of water are bicarbonate, carbonate, sulphate and chloride. Temporary hardness of water associated mainly due to carbonate and bicarbonates while permanent hardness of water is mostly due to sulphate and chloride.

MATERIALS AND METHODS

TOTAL HARDNESS (EDTA Titrimetric Method):

It is the property of water which prevents the lather formation with soap and increases the boiling point of water. Principal cation imparting hardness are Ca and Magnesium however other Cations like strontium, iron and Mn also contribute to hardness. The anions responsible for hardness are mainly bicarbonate, carbonate, sulphate, chloride, Nitrate & Silicate. Temporary hardness caused by bicarbonate and carbonate while permanent hardness caused by sulphate & chloride of the metals. Hardness in lake water is determined by EDTA (APHA, 1992).

Process: For measuring hardness, take 25 ml sample in conical flask, added 1 ml buffer solution followed by 1 ml inhibitor. Then 2 pinch of eriochrom black T indicator and titrated against standard 0.01 M EDTA till the wine red colour changes to blue.

Calculation:

$$\text{Hardness (mg/liter)} = \frac{\text{Titre value} \times N \times 1000}{\text{ml sample}}$$

Where,
N = strength of EDTA used.

Annals of Natural Sciences
Vol. 2(1) March 2015: 4-10
Journal URL: http://www.scholarsacademicpublishers.com/
Email: info@scholarsacademicpublishers.com

Annals
of
Natural Sciences

ORIGINAL ARTICLE

Analysis of Microorganisms in Chambal River at Dholpur District

Pratap Singh Tomar* and Mahendra Lakhar
Department of Zoology, Kamla P.G. College, Dholpur
*Department of Zoology, Govt. College, Morena
Email: pratapsingh.tomar@gmail.com

ABSTRACT

Biomonitoring is a reliable, convenient and quick method for observing the water quality. Various bacterial communities as well as Zooplankton and phytoplankton serve as good indicators of water quality. Concentration of Escherichia coli or algae is a valid measure for determining the load of fecal matter. The samples of water were to be collected from three sites from river polluted with municipal waste. The objective is to provide a standard method for collection of water samples for plankton and bacterial analysis. There is to use standard method for calculation of water quality, the analysis for different types of microorganisms may be done and tabulated in the present study.

Key words: Bacteria, Fungus, Protozoa, Chambal River

Received: 25th December 2014; Revised: 13th January 2015; Accepted: 21st January 2015
Copyright © Research & Scholarship Development Delhi

How to cite this article:
Tomar P.S. and Lakhar M. (2015) Analysis of Microorganisms in Chambal River at Dholpur District. Annals of Natural Sciences, Vol. 2(1) March 2015: 4-10.

INTRODUCTION

Climate change is a natural environmental issue of our time. Carbon dioxide is a greenhouse gas, and the new view of freshwaters as hotspots for carbon transformations has taught scientists more about how freshwater systems, such as rivers, may fit into the global carbon budget. Dissolved organic matter (DOM) is a critical intermediate in the global carbon cycle because it is the largest pool of reduced organic matter transformed from land to water that has the potential to be oxidized by bacteria and sunlight to CO2. Researchers at the UNC Department of Marine Science have conducted studies right here in North Carolina on the Neuse, Tar Pamlico, Roanoke and Pee Dee Rivers. They examine the source, quantity and availability of organic matter and the extent to which this organic matter is processed by freshwater microbial communities. Researchers at UNC Environmental Science and Engineering, Gillings School of Global Public Health, are studying the release of CO2 from flowing soils in the Arctic. They examine the photochemical and biochemical interactions that affect DOM and, in turn, the transformation of peat to atmospheric CO2. Recent studies show that the release of carbon dioxide into the atmosphere from freshwaters is more significant in the global carbon cycle than previously recognized. The conventional model was that streams and rivers acted as "pipes" passively conveying terrestrial carbon (produced by decomposing plants) to the ocean. The new view is that freshwaters are "hotspots" for the transformation of terrestrial carbon while it makes its long journey from headwater streams to the ocean. Scientists now know that at least 1800 million metric tons of CO2 per year is released into the atmosphere from rivers and streams during transit of carbon's journey to the oceans. By comparison, motor vehicles currently emit over 900 million metric tons of CO2 worldwide each year.

Annals of Natural Sciences
Vol. 1(1), December 2014 | 31-34
Print: ISSN 2395-6690
Email: annalsofnaturalsciences@gmail.com

Annals
of
Natural Sciences

ORIGINAL ARTICLE

Studies on Phytoplankton and Zooplankton in Chambal River at Dholpur District

Pratap Singh Diwan* and R.K. Verma
*Department of Zoology, Kanchi P.G. College, Dholpur
Department of Zoology, R.B.S. College, Agra
Email: pratapsinghdiwan@gmail.com

ABSTRACT

Plankton are microscopic organisms which are floating passively on waters of open water ecosystems. There are present in both fresh water and marine habitats drifting with current. They are of two types phytoplankton and zooplankton. Both have ecological significance to establish water quality. Presence of various phytoplankton and zooplankton in Chambal River indicate organic pollution in River at Dholpur district. Present study helpful in assessing extent of pollution on the basis of identification of zooplankton and phytoplankton.

Key words: Phytoplankton, Zooplankton, Chambal River, Dholpur District

Received: 15th August 2014, Revised: 21st October 2014, Accepted: 29th October 2014
Green Channel for Research & Environmental Development (GCRED)

How to cite this article:
Diwan P.S. and Verma R.K. (2014) Studies on Phytoplankton and Zooplankton in Chambal River at Dholpur District. Annals of Natural Sciences, Vol. 1(1): December 2014: 31-34.

INTRODUCTION

Plankton are diverse in nature, broadly divided as zooplankton and phytoplankton. Autotrophic components are phytoplankton and heterotrophic components are zooplankton, but distinction between plankton organisms are not always clear. Many of phytoplankton organisms could also initially live as plankton. Though plankton are microscopic in size but they play very important role in aquatic food chains. Phytoplankton are only producers in open waters. Plankton are short lived but their rate of reproduction is very high. Zooplankton is a categorization spanning a range of organisms size including small protozoans and large metazoans. It includes holoplanktonic organisms whose complete life cycle lies within the plankton, as well as meroplanktonic organisms that spend part of their lives in the plankton before graduating to either the nekton or a sessile benthic existence. Although zooplankton are primarily transported by ambient water currents, many have locomotion used to avoid predators (as in diel vertical migration) or to increase prey encounter rate. Ecologically important protozoan zooplankton groups include the foraminiferans, radiolarians and dinoflagellates (the last of these are often mixotrophic). Important metazoan zooplankton include cnidarians (such as jellyfish and the Portuguese Man o' War; ctenophores such as sea gooseberries; arthropods, especially copepods, krill, crustacean larvae (such as barnacle nauplii and crab zoea and megalopae); molluscs such as pteropods; and chordates such as salps and juvenile fish. This wide phylogenetic range includes a similarly wide range in feeding behavior. Many feeding habits are dominated with autotrophic phytoplankton as seen in corals. Zooplankton may also be heterotrophic, mixoplanktonic (the zooplankton constitutively derives for marine snail and even individual organisms. As a result, zooplankton are primarily found in surface waters where food resources (phytoplankton or other zooplankton) are abundant.

Annals of Natural Sciences
Vol. 2(1) September 2016: 35-37
Journal DOI: https://doi.org/10.15613/ans/2016/2016
Journal URL: http://www.annalsofnaturalsciences.com/
e-ISSN: 2455-5177
Annals of Natural Sciences

ORIGINAL ARTICLE

Biomonitoring of Water Quality in Chambal River at Dholpur District

Pratap Singh Tomar[1] and B.K. Verma[2]
[1]Department of Zoology, Kranti P.G. College, Dholpur
[2]Department of Zoology, R.B.S. College, Agra
Email: pratapsingh.tomar1@gmail.com

ABSTRACT

Society's keen interest in pollution is owing to its effect on living organisms. Since the assessment of pollution is basically a biological problem. Yet the assessment of pollution has traditionally been chemically oriented and biological aspects have been utilized as just subsidiary partners. The passage of an aquatic ecosystem is caused by different kind of pollutant, the organisms thought their presence number and behaviour can integrate the whole effect. In the present study water quality is considered on the basis of saprobic and faecal coliform measurement.

Key words: *Coliforms, Faecal coliforms, Water pollution, Chambal River*

Received: 02nd July, 2015, Revised: 29th August, 2016, Accepted: 27th August, 2016
Journal Council of Science & Environmental Development, India

How to cite this article:
Tomar P.S. and Verma B.K. (2016) Biomonitoring of Water Quality in Chambal River at Dholpur District. Annals of Natural Sciences, Vol. 2(1): September, 2016: 35-37.

INTRODUCTION

Water pollution is a major global problem which requires ongoing evaluation and revision of water resource policy at all levels (international down to individual aquifers and wells). It has been suggested that it is the leading worldwide cause of deaths and diseases and that it accounts for the deaths of more than 14,000 people daily. An estimated 580 people in India die of water pollution related illness every day. Around 90% the water in the cities of China is polluted, and as of 2007, half a billion Chinese had no access to safe drinking water. In addition to the acute problems of water pollution in developing countries, developed countries continue to struggle with pollution problems as well. In the most severe national report on water quality in the United States, 45 percent of assessed stream miles, 47% of assessed lake acres, and 32 percent of assessed bays and estuarine square miles were classified as polluted. The head of China's national development agency in 2007 said 1/4th the length of China's seven main rivers were so polluted the water burned the skin. Water is typically referred to as polluted when it is impaired by anthropogenic contaminants and either does not support a human use, such as drinking water, or endangers a marked shift in its ability to support its constituent biotic communities, such as fish. Natural phenomena such as volcanoes, algae blooms, storms, and earthquakes also cause notable changes in water quality and the ecological status of water.

MATERIALS AND METHODS

COLIFORM:

For enumerating of coliform the multiple tube fermentation process was used for the MPN count of coliform. The technique involves the several dilution of the sample in a suitable multiple after the expiry of the incubation period. The multiple tubes were examined for

Water & Environment
Vol. 22 (3) (Jul) 2017, 73-77
Website: www.waterandenvironment.com

SCIENCE NOTES

Assessment of Odour, Odour and Taste in Chanthal River of Bhadgaon District

Pratap Singh Thapa
Department of Zoology, Kanda P.G. College, Bhadgaon
Email: pratapsinghthapa1@gmail.com

Received: 20 April 2017, Revised: 22 May 2017, Accepted: 30 May 2017

ABSTRACT

River Chanthal is an important source of water in Bhadgaon district. It also has immense significance for tourism, religious activities and agriculture. Due to various pollutants present in aquatic life. For this purpose physicochemical studies can be conducted to assess various physical and chemical parameters. It is also important to observe odour, taste and color of water whether it is suitable for human consumption or not. On the basis of above statements, present study is conducted in River Chanthal of Bhadgaon district.

Key words: Odour, Taste, Pollution, Chanthal River

INTRODUCTION

Water is most vital resource for all kinds of life on the planet because without water all living beings' mechanical and physiochemical activities can not sustain. Water is also the resource adversely affected both qualitatively and quantitatively by all kinds of human activities on land, in air or in water. Though the fulfilment of water as a result of human activities is a phenomenon as old as life, the increasing industrialization, urbanization and developmental activities and consequent pollution of water has brought a veritable crisis. The extremely rapid growth, galloping technology and economic development have created awareness of environmental crisis and need for balancing the nature. It is must that man should start to live in harmony with the nature seems to be a green today most of the Rivers of world received millions of litres of sewage, domestic waste, industrial and agricultural effluents containing substances varying in characteristics from simple nutrients to highly toxic substances. The industry continued to be one of the most significant causes of pollution of aquatic ecosystem due to a diverse kind of waste produced by them.

COLOUR

River pure water is not colourless, it has got a pale green blue tint in large volume. The colour in natural water may occur due to the presence of humic and fulvic acid, metallic ions such as Manganese, suspended matter, phytoplankton, weeds and waste products. The colour of water sample was compared by visual comparison method. Colour of water sample was determined by the platinum-cobalt method, which is normally used for preparation of colour standards in which one colour unit is equivalent to the colour produced by 1.0 mg/litre of platinum.

Process: The colour of the water sample was matched with standards colour tubes by passing vertically through the tubes towards white surface placed in such an angle that light is reflected upward through the column of liquid. In case the colour of the sample was dark, the sample was diluted with distilled water. The pH of the sample measured as the colour was highly related to pH calculation. Colour = estimated colour x dilution factor.

ODOUR

Principal: The odour of water present mainly due to dissolved objectable odour organic or inorganic. The odour depends on the extent contact with the receptor organ. The odour may be of natural origin, caused by living and decaying aquatic organisms, and accumulations of gases like NH_3 and H_2S etc. Many algae also impart odours of water. Odour of water sample was measured.

Annals of Natural Sciences
Vol. 7(1) (2017): 31-37
Journal DOI: https://doi.org/10.25220/ANSci.v07.i1.0005
Annals of Natural Sciences

ORIGINAL ARTICLE

Studies on Physiological Changes in Cells cells in Chambal River at Dholpur District

Pradeep Singh Tomar
Department of Zoology, Govt. P.G. College, Dholpur
Email: pradeepsingh0008@gmail.com

ABSTRACT

Fish physiology is the scientific study of how the component parts of fish function together in the living fish. It can be contrasted with fish anatomy, which is the study of the form or morphology of fishes. In practice, fish anatomy and physiology complement each other, the former dealing with the structure of a fish, its organs or components parts and how they are put together, such as might be observed on the dissecting table or under the microscope, and the latter dealing with how these components function together in the living fish. In the view of importance of fish physiology, the effect of polluted waters of Chambal river has been observed on physiological aspect of fishes.

Key words: Gills cells, Physiological changes, Chambal river, Dholpur district.

Received: 10 Jan 2017; Revised: 12th Jan 2017; Accepted: 08th Jan 2017
Publication Centre of Advanced & Sustainable Development, India.

How to cite this article:
Tomar P.S. (2017). Studies on Physiological Changes in Cells cells in Chambal River at Dholpur District. Annals of Natural Sciences, Vol. 7(1): 31-37. DOI: 10.25220/ANSci.v07.i1.0005

INTRODUCTION

Physiological methods, previously used as health indicators in laboratory investigations on fish exposed to toxicants, have been applied to field fish living in metal polluted waters. A background to the use of a physiological approach for detecting early sublethal effects of toxic chemicals on fish is given, together with a description of the clinical parameters used and their physiological relevance. The results and experiences from the field application show that certain clinical methods may be very useful in detecting and diagnosing sublethal disturbances in natural fish populations in polluted areas. Furthermore, the results indicate a good agreement between metal-induced physiological effects detected in fish exposed under natural field conditions and those found in laboratory experiments. Here fish exchange gases using gills on either side of the pharynx (throat). Gills are tissues which consist of threadlike structures called filaments. These filaments have many functions but are involved in ion and water transfer as well as oxygen, carbon dioxide, acid and ammonia exchange. Each filament contains a capillary network that provides a large surface area for exchanging oxygen and carbondioxide. Fish exchange gases by pulling oxygen-rich water through their mouths and pumping it over their gills. In some fish, capillary blood flows in the opposite direction to the water, causing countercurrent exchange. The gills push the oxygen poor water out through openings in the sides of the pharynx. Breathing is so primarily difficult for fish that inhabit shallow, seasonally variable waters where the water's oxygen concentration can unpredictably decline. Fish dependent solely on dissolved oxygen, such as perch and carfish, can die suffocate, while air breathers survive for much longer, as some carp in water that is little more than wet mud. At the most extreme, some air breathing fish are able to survive in damp burrows for months without water, entering a state of dormancy (aestivation) until water returns.

[illegible]

e-ISSN: 2320-4339

Assessment of BOD and COD in Chambal River in Relation to Pollution of Dholpur District

Pratap Singh Tomar[1] and Mahendra Gadhia[2]
[1]Department of Zoology, K.warla P.G. College, Dholpur
[2]Department of Zoology, Govt. College, Dholpur
Email: pratapsingh.tomar01@gmail.com

Received: 5th June 2015; Revised: 12th September 2015; Accepted: 20th September 2015

ABSTRACT

The untreated disposal of industrial effluents from nearby cities along with near sewage create environmental problems affecting the chemical composition of the aquatic ecosystem and also cause heavy damage of the fishes and their populations of aquatic habitat. Industries like Fertilizer, sugar mill, paper mill, cement factory, Rubber industry, Paints, petroleum are situated in critical areas of M.P. from where Chambal River has its origin, even the entire Chambal has come to be excessively polluted and assessed in the present study BOD and COD have been analysed to assess the rate of pollution in the River.

Key words: Assessment, COD, BOD, Organic pollution

INTRODUCTION

The anthropogenic activities have severely damaged the quality of Chambal River in Dholpur but now became danger for human as well as aquatic life. Gandhi sagar project, Rana pratap sagar project, Jawahar sagar project and Kota dam project are main project on the central region of Chambal River which are useful for irrigation and electricity production. The intensity of irrigation in the Chambal basin is very high, practically the entire dry weather flow is diverted by the upper Chambal at Kota and whatever little regenerated between Kota & Dholpur has a heavy load of pollution. In this stretch the BOD in Chambal continuously rise from 10-20 gm/litre against a permissible limit of 3 gm/litre according to a rough assessment at present about 300 MLD municipal waste is being discharged in Chambal River from the line Dhar, Ujjain, Indian Malwara. Hence Kota as a result of this Chambal is going to highly polluted.

BOD (BIOCHEMICAL OXYGEN DEMAND)

It is the amount of O2 utilized by micro organism in stabilizing the organic matter. The demand of O2 of an sewage is proportional to the amount organic waste to be degraded aerobically. The complete degradation of the organic matter may take as far as 20+30 days. Simple organic compounds like Glucose completely oxidized in 5 days. The 20-30 days period is of less significance in practice therefore BOD test has been developed for 5 days at 20°C.

PROCESS

Aerated the distilled water in a container by bubbling compressed air for 1-2 hrs. At around 20 saturation and maintained the temperature at 20 degree centigrade. The add 1 ml each of phosphate buffer, magnesium Sulphate, calcium chloride and ferric chloride solutions then add 2 ml seeds (domestic) population.

DILUTION OF SAMPLE

Neutralized the sample to pH ranged 7.0 using dilute or acid (NaOH or H2SO4). Two dilution samples were made in the range of 10% to 70%. It is recommended to have lower dilution to give 70%. Taken the diluted water in BOD bottles by siphon and stoppered immediately. Keep one bottle for the determination of the initial (zero day) DO and other two bottles incubated in BOD incubator at 20 degree centigrade for 5 days. Prepared two blanks by replacing our only the dilution water in to the dissolved oxygen (zero day), and the other is incubated at 20 degree centigrade for 5 days. Determine D.O. in the sample and in the blank on initial (zero day) after 5 day.

Annals of Natural Sciences
Annals of Natural Sciences

ORIGINAL ARTICLE

Statistical Interpretation of Important Hydro Biological Parameters in Chambal River at Dholpur District

Pratap Singh Tiwari and R.K. Verma*
Department of Zoology, Kendriya College, Dholpur
Department of Zoology, B.R.A. College, Agra
Email: pratapsinghtiwari@rediffmail.com

ABSTRACT

The Chambal River is a tributary of the Yamuna River in central India, and thus forms part of the greater Gangetic drainage system. The River flows northeastward through Madhya Pradesh forming for a time through Rajasthan then forming the boundary between Rajasthan and Madhya Pradesh before turning southeast to join the Yamuna in Uttar Pradesh state. It is a legendary River and finds mention in ancient scriptures. Present study is designed to explore and analyze ecological parameters on the basis of statistical surveys to signify the data for a single site.

Key words: water quality, biomonitoring, hardness, turbidity

Received: 8 July 2018; Revised: 12 Feb 2019; Accepted: 20 Feb 2019;
Published: Council for Research & Sustainable Development, India

How to cite this article:
Tiwari P.S. and Verma R.K. (2019): Statistical Interpretation of Important Hydro Biological Parameters in Chambal River at Dholpur District. Annals of Natural Sciences, Vol. 4(1): March, 2019; 66-78.

INTRODUCTION

The perennial Chambal originates at Janapav, south of Mhow town, near Indore, India, on the south slope of the Vindhya Range in Madhya Pradesh. The Chambal and its tributaries drain the Malwa region of northwestern Madhya Pradesh, while its tributary the Banas, which rises in the Aravalli Range, drains southeastern Rajasthan. It ends a confluence of five rivers including the Chambal, Kwari, Yamuna, Sind, Pahuj, at Pachnada near Bhareh in Uttar Pradesh state, at the border of Etawah and Bhareh districts. The Chambal River is considered pollution free, and hosts an amazing diversity faunal assemblage including 2 species of crocodilians– the mugger and gharial, 8 species of freshwater turtles, smooth coated otters, gangetic river dolphins, skimmers, black bellied terns, batagur turtles and black necked storks, amongst others.

Rivers play a vital role in integrating and organizing the landscape, and modeling the ecological setting of a basin. River Chambal is the most significant water resource of the state of Madhya Pradesh catering to the demands of a large number of cities and towns situated on its banks. Apart from the supply of potable water, the River is also ecologically very important as it harbours very rich biodiversity. The Chambal River is a tributary of the Yamuna River in central India and forms part of the greater Gangetic drainage system. It is a legendary River and finds mention in ancient scriptures. The perennial Chambal originates at Janapav, south of Mhow town, near Indore, on the south slope of the Vindhya Range in Madhya Pradesh. The Chambal and its tributaries drain the Malwa region of north western Madhya Pradesh, while its tributary the Banas, which rises in the Aravalli Range, drains south eastern Rajasthan. It ends a confluence of five Rivers including the Chambal, Kwari, Yamuna, Sind, Pahuj, at Pachnada near Bhareh in Uttar

Vol. 1 (1) January-February

ISSN: 2455-4146

Studies on Hydrobiology of Chambal River Pertaining to Sulphates and Phosphates at Dholpur, Rajasthan

Pratap Singh Tiwari
Department of Zoology, Kanta PG College, Dholpur
Email: pratapsinghtiwari@gmail.com

Received 11th Dec 2015, Revised 30th Dec 2015, Accepted 15th Jan 2016

ABSTRACT

Water for suitable life of every organism life, without water living existence can not possible on this planet. It means water source on the Earth, below the surface of atmosphere and on the mountain. Almost all sources of fresh water including rivers and ponds are polluted due to urbanization and industrialization of the present time. Every revolution for using prosperity have contributed a lot of water and soil pollution. In the present study sulphate and phosphates have been evaluated in River Chambal at Dholpur.

Key words: Hydrobiology, Sulphate, Phosphate, Water quality

INTRODUCTION

The industrial effluents, sewage and other pollutants when discharge in to any stream or River, not only cause pollution but disturb the whole biological system of biotic and abiotic habitat. Villagers of the coastal region of River and streams generally bathe their cattle due to which the oxygen supply in the water is reduced and algae increases which diminishes the fish stock of water. Due to bathing of some birds the dead bodies generally throw in Rivers which causes harm to polluted our life. Chambal River is boon for Raj. and M.P. because its water is good for agriculture and for drinking purpose through water wells. In the present investigation the water quality of Chambal river has been observed to be of satisfactory quality because various untreated industrial effluents from Kotaa coastal region merge inside the River. Further municipal sewage mingle in the River without any treatment and deteriorate Chambal water. Therefore, it has become necessary to assess the water quality of Chambal River and its impact of aquatic fauna.

MATERIALS AND METHODS

SULPHATE (TURBIDITY METRIC METHOD):

It is a naturally occurring anion in all kinds of natural water. Discharge of industrial waste and domestic sewage in water tends to increase its concentration most of the salt of sulphate are soluble in water and as such it is not precipitated. Sulphate is an important constituent of hardness with calcium and Magnesium. It has got some indirect significance by producing H2S which helps in corrosion of concrete thus posing serious problem in the waste water collection pipe.

Principal: Sulphate ion precipitated in the form barium sulphate by adding Barium chloride in hydrochloric acid medium. The concentration of the sulphate can determine from the absorbance of the light by Barium sulphate and then comparing with a standard.

Process: Taken 50 ml sample in conical flask then add 25 ml. containing reagent (mix 50 ml glycerol+30 ml. conc HCL+300 ml. distilled water+100 ml 95% ethyl alcohol+75 g NaCl) then add stirred and both crystal and stirred continuously for 1 min. Measured the turbidity developed after every 30 sec. for 4 minutes on colorimeter at 420 nl after 2 minutes stirring reading will remain constant. Prepared standard curve by carrying standard sulphate solution through entire procedure same standard at 5 mg/litre increment in the 0 to 40 mg/litre range. Then read the sulphate present in the sample from the standard curve.

Calculation:

$$\text{Sulphate (mg/litre)} = \frac{\text{mg Ba sulphate} \times 1000}{\text{ml sample}}$$

e-ISSN 2455-6378

Annals of Natural Sciences

Annals of Natural Sciences

ORIGINAL ARTICLE

Assessment of Water Temperature and Water Flow Conductivity in Chambal River at Dholpur District

Pratap Singh Tiwari
Department of Zoology, Kanha P.G. College, Dholpur
Email: pratapsingh1tiwari@gmail.com

ABSTRACT

Chambal River is major source of potable water, the River is also ecologically very important as it harbours very rich biodiversity. Chambal River is only water source for Rajasthan and its water quality should be always checked to precaution entered. Present study revealed that water quality parameters temperature and water flow measurements of some sample site showed common results and abundance in quality of Chambal River in pre monsoon. The water quality was monitored in various sample site and all parameters were found under limit, the should maintain quality of water because Chambal River is major source of drinking water for districts of Rajasthan.

Key words: temperature, water flow conductivity, water quality, Chambal River.

Received: 01 Jan 2018, Revised: 28th Feb 2018, Accepted: 10th Feb 2018

How to cite this article:
Tiwari P.S. (2018). Assessment of Water Temperature and Water Flow Conductivity in Chambal River at Dholpur District. Annals of Natural Sciences, Vol. 4(1): March, 2018: 63-65.

INTRODUCTION

Chambal River plays an important role in irrigating and organizing the landscape, and moulding the ecological setting of a location. It is the most significant water resource of the state of Rajasthan as full fill the water demands of a large number of cities and towns situated on its banks. Chambal River is major source of potable water, the River is also ecologically very important as it harbours very rich biodiversity. Some authors also revealed that the diversity and endemism indexes are an indication of moderate River health. The Chambal River is a tributary of the Yamuna River in central India, and forms part of the greater Ganges drainage system. It is a legendary River and finds mention in ancient scriptures. The perennial Chambal originates from Mhow town, near Indore, Madhyabharat. The Chambal and its tributaries drain the Malwa region of north-western Madhya Pradesh, while its tributary, the Banas, which rises in the Aravalli Range, drains south-eastern Rajasthan. It ends a confluence of five Rivers including the Chambal, rivers Yamuna, Sind, Pahuj, at Pachnadanwar Bluesh in Uttar Pradesh state, at the border of Etawah and Etawah districts. People along the River use water for many purposes. Water is the basic element for the life to all living creatures on earth. In Rajasthan, Chambal River are the major sources of water where a large part of population in district and rural depends on them for their daily water requirement. Some researchers reported that Chambal River is considered pollution free and hosts an amazing Riverine faunal assemblage including two species of crocodilians, the Mugger and Gharial, 8 species freshwater turtles, smooth-coated otters, gangetic River dolphins, skimmers, black-bellied terns, ruddy and black-tailed shelds, amongst others. In this paper, an attempt has been made to assess the water quality on physico-chemical to study the extent of pollution in River Chambal in dholpur district.

[illegible]

[illegible]

Assessment of Water Quality of Chambal River in Relation to Turbidity and pH at Dholpur District

Pratap Singh Tiwari
[illegible]
[illegible]

[illegible]

ABSTRACT

Water pollution is an emerging problem for both developed and developing countries because India contributed system to exploit ground and fresh water because wastage of potable water for variety. Scientific by which are major source of potable water in developing countries are facing serious pollution problem is same city in dholpur district of Rajasthan (India). River Chambal is also facing such problem. The attempt the researchers to work on water quality of River Chambal in this region. Keeping their points in view, present study is designed to measure turbidity and pH of water in dholpur.

Key words: physico-chemical parameter, Turbidity, pH, dholpur district.

INTRODUCTION

Now a days fresh water ecosystem, due to urbanization, population density explosion as well as industrialization have become polluted. Sewage and domestic waste from cities also discharge in to Rivers, not only cause pollution but drastically disturb the fauna and flora of ecosystem. water pollution nowadays is considered not only in term of public health but also in term of conservation, aesthetics and preservation of natural beauty and resources. The same is true in Chambal River, flowing through dholpur distt. it there fore time to assess water quality of Chambal at down stream site II and up stream site a selected the water quality in dholpur distt. it was the beginning of 1970's when in India environmental pollution became a serious problem. as Chambal River flows three different industrial cities it is pointed out that population growth is responsible to increase the quantity of waste water due to addition of the large quantities of sewage as sewage consist of degradable organic matter and oxygen demand on the receiving water, due to pollution, BOD, in Chambal River rises to 10 to 15 mg/l against a permissible limit of 3 mg/l. approximate 200 mld of sewage discharge in Chambal River from different areas which situated on the bank of Chambal river, and e.g. dholpur is a developing city so continues small scale industrialization and urbanization is responsible for increasing the pollution in Chambal River from up stream site a to down stream site II of dholpur area.

MATERIALS AND METHODS

TURBIDITY:

It is caused by the substances which not present in the form of true solution. True solutions consist of 10-7 metre particle size. Any substance which have more than this size will produce turbidity. Turbidity of water is actually the expression of optical property (Tyndal effect) in which the light is scattered by the particle present in water. For measuring turbidity when light passed through a sample having suspended particles, some light rays are reflect but scattered by the particles, this scattering of the light is directly proportion to the turbidity.

Process:

Stock turbidity suspension:

Solution A

Dissolved 1000 gm Hydrazinesulfate (NH_2)$_2$.H_2SO_4 in 100 ml distilled water.

Solution B

Dissolved 1000 mg Hexamethylene tetramine (CH_2)$_6N_4$ in 100 ml distilled water.

ISBN : 978-93-5

Spiritualism, Yoga, Herbal Renaissance & Environmental Consciousness in the World

Kamla P. G. College

Dholpur, Rajasthan, India

Publisher Social Research Foundation, Kanpu

Study of The Impact of The Internet/Technological Gadgets Use on Physical And Mental Health: A Survey of College Students

Dr. Pratap Singh Tiwari & Shivani Goyal
Department of Zoology, Kanta PG College, Dholpur, Rajasthan, India

Abstract

Today's young generation is being considered to be the centre and the basis for future potentials and features of one or another nation. Most of their decisions are not based on logic but are influenced by the social environment in which they exist. Although advance technologies are quite essential in this fast moving era but addiction to such gadgets can cause health hazards as well as social imbalances or mental health. The degree of dependency that most individuals have is leading to addiction to technological devices. The study was designed to examine addiction to technological devices along with investigating its effect on an individual's physical health and mental health. The aim of the study was to examine the time spent by individuals using technological devices, investigate the intentions behind the use of technological devices and services. By the use of structured questionnaire, primary data was collected from 100 respondents, aged between 17 and 28 years. The findings of the study show that 14% of all participants use some kind of technological device for more than 8 hours a day and their anxiety level is severe. It is also being found that the participants, who use internet for 1-2 hrs, are mostly for the purpose of social networking purpose. Sleeping disturbance was found in the participants who spent above 6 hrs in a day on the internet/ technological gadgets. Males have higher number to show 'neglect effect' than females due to more busy in mobile/technological gadgets. The study also reveals that the devices were being used for the individual's pleasure rather than for a necessity. Overall, it was found that the level of technological device usage can affect an individual's behavior which in turn can affect their own lifestyle, health and social skills. The results of study have been interpreted based on current studies and theories.

Introduction

The term "internet addiction" was proposed by Dr. Ivan Goldberg for pathological compulsive Internet Usage. All the findings and clinical implications discussed here have several similarities with other forms of addictive behaviors. They are consistent with neurobiological and psychological models of addiction (Robinson and Berridge, 2003). People with internet addiction disorder had reduced striatal dopamine transporters and suggest that Internet addiction disorder might cause serious damage to the brain (Hou et al., 2012).Recent data has suggested that Internet use disorders may be associated with specific brain lesions or dysfunction. Internet addiction may be a clinically relevant disorder (Goldberg, 1996). Use of the internet that creates psychological, social, school or work difficulties in a person's life is a multidimensional syndrome consisting of cognitive and behavioral symptoms that result in negative social, academic or professional consequences (Caplan, 2002, 2003; Davis, 2001; Davis, Flett, & Besser 2002; Morahan, Martin & Schumacher, 2003). People, who spare little time for real people in their life, prefer to spend time alone on computer. Addicted internet users are much more lonely comparing non-addicted ones (Nalwa and Anand, 2003). At the international level, mental health is receiving increasingly importance as reflected by the WHO focus on mental health as the theme for the World Health Day (4th October 2001).The introduction of modern technological gadgets has captured the attention of global population. Depression based research for brain development exposure to high technology stimulates to brain alteration and neurotransmitters release, voluntary strengthening new pathways in the brain.

Neurobiology of Addiction

The study of how the brain and its components operate on an anatomical and physiological level, and biochemical agents and processes to our understanding of engagement in youth hacking. Through the expediency in which reward and punishment occurs in cyberspace, neural connections may be activated in high densities and volumes as we navigate the cyber world. Dopamine can be released quickly as vulnerable youth achieve frequent and rapid successes online, and if these successes are linked to anti-social acts, such as hacking, they will be reinforced to pursue further ends to obtain their gains. In otherwords the variable ratio reinforcement schedule of internet use and abuse and dopamine/hack use connection.

Material and Method

Study Area

This study is based upon the fieldwork conducted in Dayalbagh Educational Institute, Agra. The fieldwork was conducted during August to October, 2017. It is based upon primary data collection using questionnaire survey.

Sample

100 subjects were recruited to find out the level of internet addiction. The questionnaire participants are the individuals aged between 17-28 years. The time spent by the participants was allowed for not more than 15 minutes. The education of the sampled students varied from undergraduate (UG), postgraduate (PG) and doctoral (Ph. D).